MUTOH

User's Guide

COLOURGEN

spitfire extreme

i2

For Maintenance Kits, Spares,
Service and Support
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24 February 2011
Published: Mutoh Belgium nv, Archimedesstraat 13, B-8400 Oostende, BELGIUM

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1 SAFETY INSTRUCTIONS

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1.1 REGULATIONS

The CE marking is a mandatory European marking for certain product groups to indicate conformity with the essential health and safety requirements set out in European Directives.

By affixing the CE marking, the manufacturer, his authorized representative, or the person placing the product on the market or putting it into service ensures that the item meets all the essential requirements of all applicable EU directives and that the applicable conformity assessment procedures have been applied.

This product is tested and approved by the Canadian Standards Association (CSA), this to provide increased assurance of quality and safety.

The product is tested according to IEC60950.
This standard tries to cover all safety aspects.
Mechanical, electrical
Choice of components
Choice of materials: flammability!
Connectors, cables …
Fire enclosure
…

This means the product is safe for users, service personnel and production personnel.

CSA International certification is not a legal commitment but it assures the quality and safety of the machine.

Your product is designed and manufactured with high-quality materials and components, which can be recycled and reused.

When this crossed-out wheeled bin symbol is attached to a product, it means the product is covered by the European Directive 2002/96/EC – WEEE regulation.

Please inform yourself about the local separate collection system for electrical and electronic products.

Please act according to local rules and do not dispose of your old products with your normal household waste. The correct disposal of your old product will help prevent potential negative consequences for the environment and human health.

FCC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

ICES

This Class A digital apparatus complies with Canadian ICES-003.

1.2 MANAGING VOC'S

When Mutoh printers with (low)-Solvent inks are used, volatile organic compounds (VOCs) will be released. In order to protect human health and the environment, VOCs must be managed. This means VOCs need to be controlled and compliance with all local, state and federal environmental, occupational health and safety regulations on VOCs in the atmosphere and in the workplace is needed.
The amount of released VOCs depends on multiple factors: room volume, unforced ventilation, print mode, number of printers in the room, heaters settings, kind of media, use of extra dryers, print production…
Because of differences in local regulations and working conditions, it is recommended to consult a local consultancy agency to determine the regulations involved. An acknowledged laboratory can determine the total amount of released VOCs in the atmosphere and in the workplace. Consequently they can determine if forced ventilation for occupational health and air pollution control devices are needed. An engineering firm could be consulted on the installation of the ventilation system where prints are produced, handled and stored.

1.3 HANDLING INKS AND WASTE

Before handling inks / cleaning fluids and their waste, please read the Material Safety Data Sheets (MSDS) and the labels for important health, safety and environmental information carefully. All safety data sheets are periodically updated. These sheets and their translations can be found on **www.mutoh.eu/Products/Downloads/extra/msds** .

Only use original manufacturer's ink and appropriate cleaning liquid. Before installing an ink holder, shake it gently. Doing so will preserve print quality.

When ink is moved from a cold place to a warm place, keep the ink for three hours or more in the new printing environment before printing.

Do not disassemble ink holder. Otherwise, ink may get in your eyes or on your skin. A disassembled ink holder cannot be used either.

When refilling ink, use original manufacturer's ink. Our Mutoh printers are designed to use original ink. If you use ink which are not produced by the original manufacturer :

- printing might become blurred and the end of the ink in the holder might not be detected correctly
- Any problems caused by using an ink holder other than those recommended above will not be covered by the warranty, and repair expenses will be paid by the customer.

For handling waste : see section 13 on the MSDS-sheet

Inks / Waste

- General advice: wear safety glasses and gloves especially when handling the waste ink.
- After spill: remove contaminated clothing.
- After inhalation: if difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.
- After skin contact: wash thoroughly with soap and water.
- After eye contact: wash affected eyes for at least 15 minutes under running water while the eyelids are held open.
- After swallowing: rinse mouth and drink plenty of water. Never induce vomiting.

1.4 WARNING, CAUTIONS AND NOTES

Safety terms in this manual and the contents of warning labels attached to the printer are categorized into the following three types, depending on the degree of risk (or the scale of accident).
Read the following explanations carefully and follow the instructions in this manual.

Safety terms	Details
⚠ Important ⚠	Must be followed carefully to avoid death or serious bodily injury.
⚠ Caution ⚠	Must be observed to avoid bodily injury (moderate or light) or damage to your equipment.
⚠ Notes ⚠	Contains important information and useful tips on the operation of your printer.

1.5 SAFETY INSTRUCTIONS

Machines must be installed according to Mutoh's Installation Guide also after moving machines to another location; maintenance needs to be done according to the maintenance manual.

To prevent fire or electrical shock, never use a power supply source other than the one rated for the product in the country where you purchased the product.

Use only the provided power cable. To prevent fire or electrical shock, follow the instructions below when handling the power cable:

- Do not cut or modify the cable.
- Do not put heavy objects on the cable.
- Do not bend, twist, knot or pull the cable.
- Do not wire the cable near equipment that generates heat.
- Do not use the cable with any other electrical device
- Do not handle the cable with wet hands

Be aware of all caution and warning labels to avoid potentially hazardous situations.

To prevent fire or electrical shock, machines must be connected to a properly grounded electrical power outlet. Do not connect the power cable to a power strip or a power source shared by other electrical devices.

- Make sure that no foreign substances such as dust etc. are stuck to the power plug.
- Make sure that the power plug is firmly inserted to the edge of the power socket.

Do not disable any safety precautions systems.

Do not operate the unit unless all parts are mounted.

Do not place the machine in the following areas. Doing so may result in the machine tipping or falling over and causing injury.

- Unstable surfaces
- Sloping floors
- Areas subject to vibration by other equipment

Do not stand on or place heavy objects on your machine. Doing so may result in the machine tipping or falling over and causing injury.

Do not place the machine in humid and dusty areas or in areas exposed to flammables. Doing so may result in electrical shock or fire.

Do not cover the ventilation hole of your machine with cloth, such as a blanket or table cloth. Doing so could obstruct ventilation and cause fire.

Do not insert or drop metal or inflammable objects into openings, such as ventilation outlets. Doing so may result in electrical shock and fire.

Do not touch the media guide during printing. It is hot and may cause a burn.

Do not touch the media feed slot, platen or media guide while heaters are operating. They are hot and may cause a burn.

Stop using your machine if a liquid has been spilled into it. This may cause electrical shock or fire. Switch the machine off as soon as possible, unplug the power cord, and contact your local MUTOH dealer.

Be sure to power OFF the machine and unplug the power cable from the outlet before cleaning the machine. Use a damp cloth to clean the machine. Do not use thinner, benzene, alcohol or other active agents. Doing so may result in damage or paint peeling from the casing.

Do not bend or pull the waste fluid tube. Doing so may cause waste fluid to leak out and malfunction of the product.

Do not tilt the machine, place it against a wall or turn it upside down. Doing so may cause ink to leak inside the machine. Movement after transport is also not covered by the warranty.

When cutting roll media, be careful of the following. Incorrect handling can result in injury to the hands and fingers from the razor blade.

- When holding the media, do not place fingers over the media cut groove.
- Move the razor blade slowly along the media cutting groove.

To prevent back pains and other injuries, always work with at least 4 people to unpack or move the machine. Keep the machine horizontally during transportation.

Do NOT transport the machine to another room without contacting your local Authorized Mutoh Dealer.

1.6 WARNING LABELS

The handling, attachment locations, and types of warning labels are explained below.
Warning labels are attached on areas which require attention. Read and understand the positions and contents thoroughly before performing your work.

1.6.1 Handling the warning labels

Be sure to note the following when handling the labels.

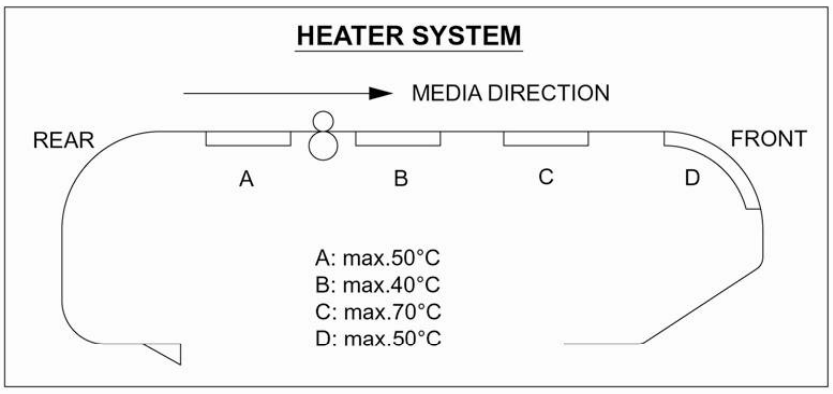
⚠ Notes ⚠

Make sure that all labels can be recognized. If text or illustrations cannot be seen clearly, either clean or replace the label.
When cleaning labels, use a cloth with water or neutral detergent. Do not use a solvent or gasoline.
If a warning label is damaged, lost or cannot be recognized, replace the label. When replacing warning labels, contact your local MUTOH dealer.

1.6.2 Locations and types of warning labels

The locations of warning labels are shown below.

1.6.2.1 Location and types of warning labels on front part.

N°	Type
1	
2	
4	
5	 HEATER SYSTEM MEDIA DIRECTION REAR FRONT A B C D A: max.50°C B: max.40°C C: max.70°C D: max.50°C

6

7

CAUTION VORSICHT ATTENTION

> Do not open the front cover or touch the media during printing.This will result in poor image quality.
> If no printing is to be done for some time, remove the media and put the pressure rollers in the up position. Otherwise the media may lift up and become wrinkled and you will not be able to obtain good printing results.

> Öffnen Sie während des Druckens die Frontabdeckung nicht und berühren Sie das Druckmaterial nicht.
> Wenn Sie während längere Zeit den Drucker nicht benutzen, nehmen Sie das Druckmaterial heraus und stellen Sie die Drucksrollen in die obersten Position. Sonst kann sich das Druckmaterial aufheben und zerknittern und demzufolge erzielen Sie keine gute Druckergebnisse mehr.

> N'ouvrez pas le couvercle quand l'imprimante est en train d'imprimer. Ne touchez pas non plus le papier afin d'éviter que la qualité s'aggrave.
> Si vous ne comptez pas imprimer pendant un certain temps, retirez le papier et mettez les rouleaux de pression en position levée. Sinon, le support risque de se soulever et de se froisser et vous n'obtiendrez pas de bonne qualité d'impression.

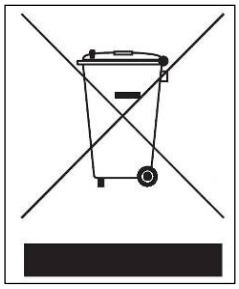
8

Number of colours		Slot number of ink cassette							
		1	2	3	4	5	6	7	8
4	2x4 colours	Black	Yellow	Cyan	Magenta	Magenta	Cyan	Yellow	Black
6	1x6 colours	Black	Cyan	Transition Liquid	Transition Liquid	Yellow	Magenta	Light Cyan	Light Magenta

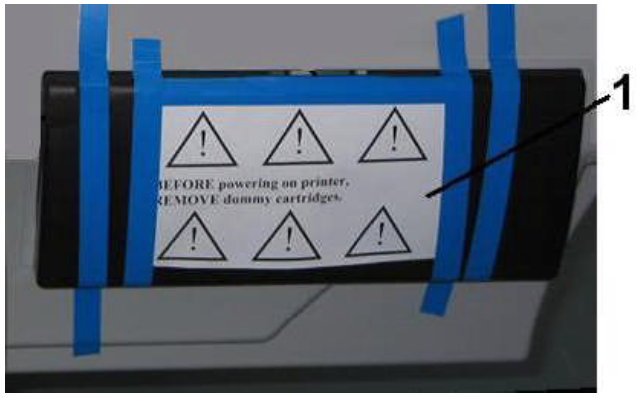
9

10

1.6.2.2 Location and types of warning labels on back part.

N°	Type
1	CAUTION THIS UNIT HAS TWO POWER SUPPLY CORDS, WHEN WINDING UNIT IS PROVIDED. TO REDUCE THE RISK OF ELECTIRACL SHOCK, DISCONNECT ALL POWER SUPPLY CORDS BEFORE SERVICING.
2	

1.6.2.3 Labels in function of transportation



N°	Description
1	BEFORE powering on printer, REMOVE dummy cartridges.

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2.1 PRINTER

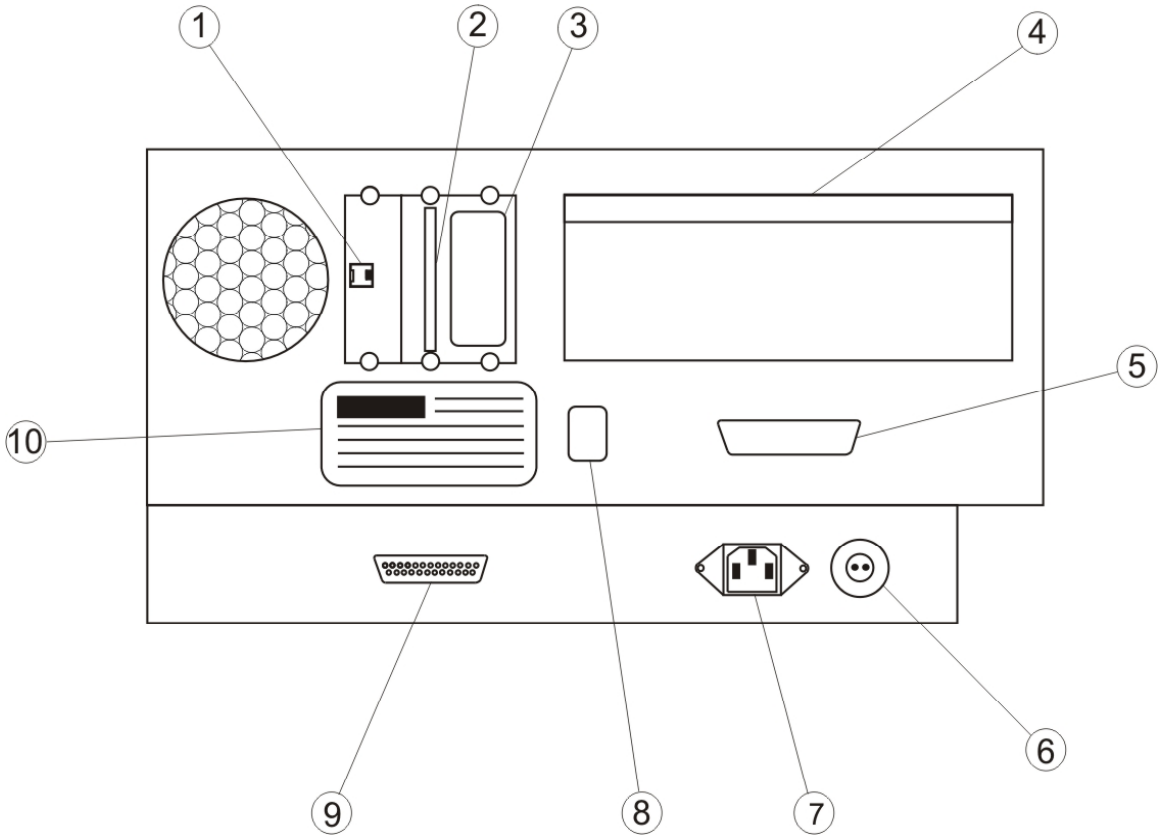
Part names and functions are explained below.

2.1.1 Front

N°	Name	Function
1	Heater plate	Supports and heats the media during printing.
2	Front cover	Keeps the operator safe from the drive parts of the printer while it is operating. Only open and/or close the cover to perform following operations: Media setting and replacement Cutter blade replacement Cleaning the cleaning wiper
3	Carriage	Drives and holds the print heads.
4	Operation panel	To control the printer.
5	Ink compartment cover	Covers the ink compartment.
6	Stand	Carries the main body.
7	Waste bottle assembly	Collects the waste fluid.
8*	Winder	Rolls up the roll media.
9*	Front tension system	Keeps the media under tension.
10	Left maintenance covers	Covers the maintenance areas.

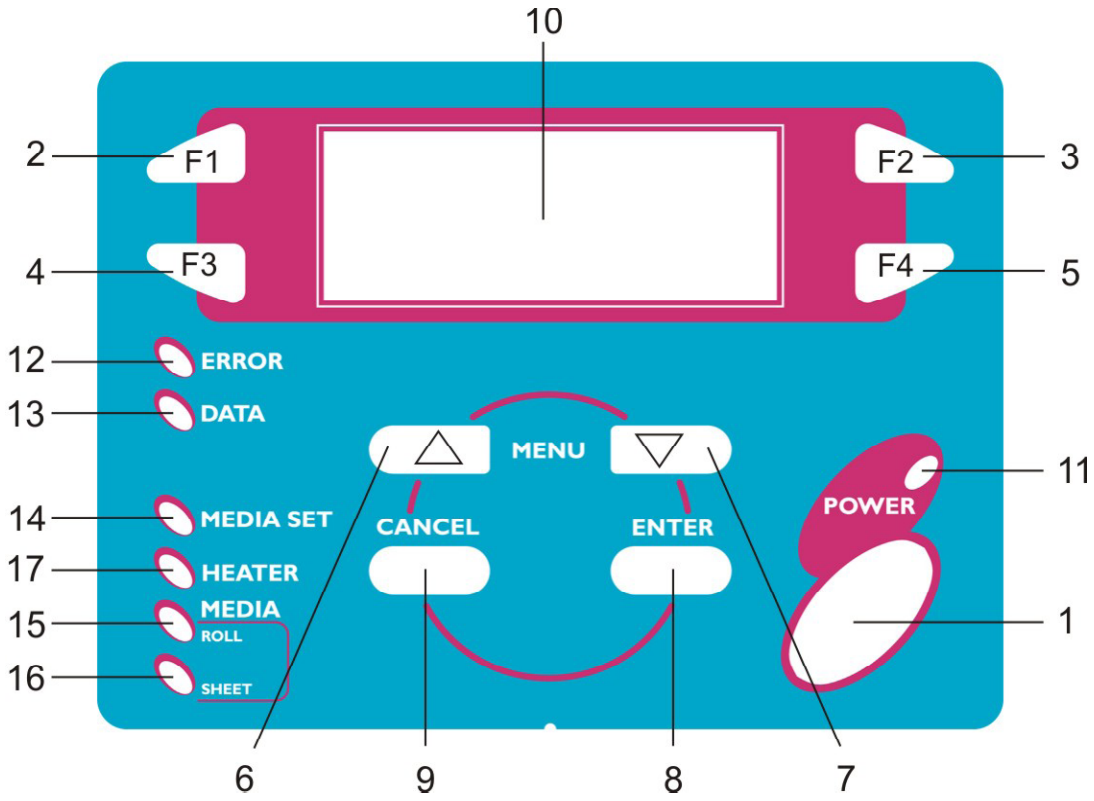
* Only applicable when having an unwinder/winder 100 installed

2.1.2 Rear



N°	Connection
1	Ethernet connector
2	Card reader slot
3	SmartChip label
4	HardDisk bracket cover
5	Centronics connector
6	Foot switch connector
7	Power inlet
8	Environmental label
9	DB-25 connector
10	ID label

2.1.3 Operation panel



2.1.3.1 Keys

N°	Name	Normal	Setup menu display
1	[POWER] key	Switch the printer ON and OFF	Switch the printer ON and OFF
2	[F1] key	Executes the function assigned to F1.	Executes the function assigned to F1.
3	[F2] key	Executes the function assigned to F2.	Executes the function assigned to F2.
4	[F3] key	Executes the function assigned to F3.	Executes the function assigned to F3.
5	[F4] key	Executes the function assigned to F4.	Executes the function assigned to F4.
6	[MENU ↑] key	Changes the LCD monitor display to the setup menu status.	Changes the menu in reverse order.
7	[MENU ↓] key	Changes the LCD monitor display to setup menu status.	Changes the menu in forward order.
8	[ENTER] key	Displays the print mode currently set.	Determines the new parameter value and changes the LCD monitor display to the next menu. Sets the parameter value and changes the LCD monitor display to the next menu.
9	[CANCEL] key	-	Cancels the new parameter value and changes the LCD monitor display to the next menu. Clears the parameter value and changes the LCD monitor display to the next menu.

LCD and LED's

N°	Name	Colour	Status	Function
10	LCD monitor	-	-	The monitor displays the operation status and error messages of the printer.
11	POWER lamp	Green	ON	The printer is on.
			OFF	The printer is off.
12	ERROR lamp	Red	Flashing	An error has occurred. The contents will be displayed on the LCD monitor.
			OFF	Either there is no error or the power is off.
13	DATA lamp	Orange	ON	The printer is receiving print data.
			Flashing	The printer is analyzing received data.
			OFF	The printer is waiting to receive print data.
14	MEDIA SET lamp	Orange	ON	The pressure roller is in the release position. Media has not been loaded.
			OFF	The pressure roller is in the secured position. The media has not been loaded.
15	ROLL lamp	Orange	ON	The media type is set to roll media.
			OFF	The media type is set to sheet media.
16	SHEET lamp	Orange	ON	The media type is set to sheet media.
			OFF	The media type is set to roll media.
17	HEATER lamp	Orange	ON	The temperature of the heating elements is the requested temperature. The real temperature is the same as the requested temperature.
			Flashing	The heating elements are warming up. The real temperature is different as the requested temperature.
			OFF	The heating elements are powered OFF.

2.2 HEATER SYSTEM

Under the print platforms, heater strips are attached. Each heater can be set separately. Please refer to the table below to know the function of each heater.

Heater element	Function
Pre-heater (Heater A)	Open the pores to make the media more receptive for Mild Solvent Plus Series Ink
Fixer (Heater B)	To establish optimum fixation onto the media (coated and uncoated). Optimizes the dot gain control.
Post-Fixer (Heater C)	The post-fixer finalizes the fixation process and helps to make the prints touch-dry.
Dryer (Heater D)	The dryer completes the drying for compatibility with the take-up in combination with higher output speeds. Stickiness of printed banner materials is improved.

There have been a number of requests from the field, asking the heaters to be on by default for a few user settings. This has now been implemented as follows:

For user 1 and user 8 default settings are as follows:
Pre heater A: 50°C
Fixer B: 40°C
Post Fixer C: 50°C
Dryer D: 50°C

For users 2 ➔ 7, by default the heaters are still OFF.

⚠ Notes ⚠

Please note some RIP software do not allow selection of the user from software side. In some cases, however, they do automatically activate user 8.

2.3 INSTALLATION ENVIRONMENT

An Authorized Mutoh technician will install your unit and will make the printer ready for its first job. A room which meets the environmental and space conditions should be foreseen by the user.

⚠ Important ⚠

Do not place the printer on unstable, slanted or vibrating surfaces. Doing so may cause the product to fall, become damaged, or cause injury.
Do not stand on the printer or place any heavy objects on it. Doing so may cause it to fall over, become damaged, or cause injury.
Do not cover the ventilation hole of the printer with cloth, such as a blanket or table cloth. Doing so could prevent the printer from ventilating and cause fire.
Keep the printer away from humid and dusty areas. This could result in electrical shock or fire.

2.3.1 *Environment*

Area	65" model	12.7m² (144ft²) or larger. Frontage of 4.7m (15.7ft) or greater.
	90" model	14.3m² (162ft²) or larger. Frontage of 5.3m (17.7ft) or greater.

Floor loading capability	2940Pa (300kg/m²) or more

		65"	90"
Electrical	Voltage	AC 100-120V AC 220-240V	AC 100-120V AC 220-240V
	Frequency	60/50Hz	60/50Hz
	Capacity	AC100V-120V : 12 A AC220V-240V : 6 A	AC100V-120V : 13 A AC220V-240V : 7 A

In order to protect the printer for over currents, short circuits and earth faults, the building installation should be equipped with an automatic breaker double pole of 20 A and an earth leakage switch of 300 mA.

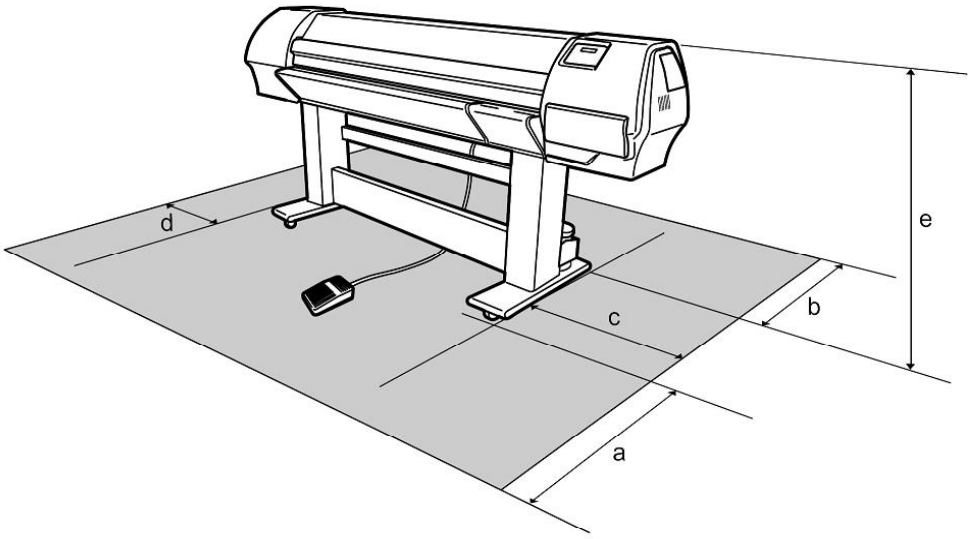
Ambient conditions	Recommended working environment	Temperature: 23°C Humidity: 55%, without condensation
	Operational conditions for mild series ink	Temperature: 20°C - 30°C Humidity: 40% to 65%, without condensation
	Rate of change	Temperature: No more than 2°C per hour Humidity: No more than 5% per hour
	Storage and transport conditions	Temperature: 4°C to 50°C Humidity: 40 to 80%, without condensation (When ink has been discharged.)

⚠ Notes ⚠

Avoid the following temperature and humidity conditions. Otherwise, printed images may appear differently from what you expect:
Places where sudden changes in temperature and humidity are expected, even though the condition is within the range written above.
Places where direct sunlight or excessive lighting are expected.
Places where air conditioners blow directly.
MUTOH recommends that the printer should be installed where air conditioning can be adjusted easily.

2.3.2 Working space

Install the product on a flat surface that fulfils the following conditions.



a = 1500mm
b = 1500mm
c = 2500mm
d = 600mm
e = 1250mm

3 BASICS

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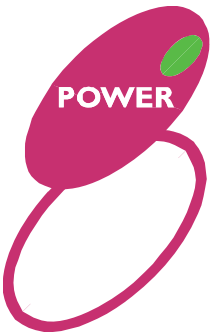
3.1 POWERING ON CYCLE

⚠ Caution ⚠

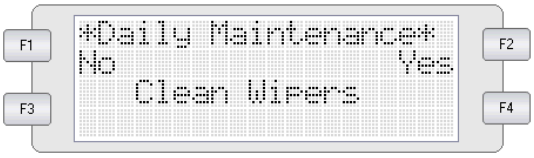
Before powering ON the printer, verify that the waste bottle is installed and that the waste tubes are connected to the waste bottle.

Power ON the printer according to the procedure below:

Step 1 : Press the [POWER] key of the operation panel.
The POWER lamp of the operation panel will light (green).



Step 2 : The printer will ask if you want to clean the wipers. When it is the first start up in a few hours, it is highly recommended to press [YES] – [F2] and to clean the wipers with appropriate cleaning in order to remove all ink and to make the wipers more elastic.

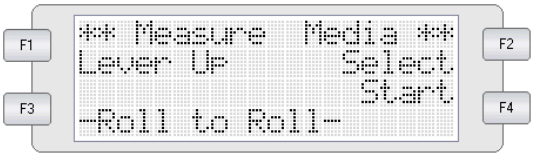


Step 3 : Press the ENTER key when you have done. The carriage will cap in again.

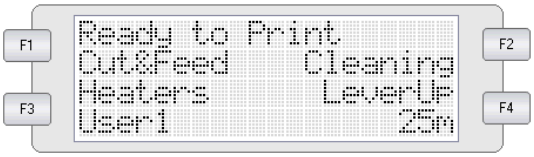
Step 4 : After finishing the daily maintenance, the print will automatically perform a normal cleaning.

Step 5 : After finishing the cleaning cycle, the media measurement screen will be displayed (in case there is media loaded)

Step 6 : Make the correct settings and press the [F4]-key to start the media initialization.



Step 7 : If everything is done correctly, the following screen should appear.



⚠ Notes ⚠

If there are any problems during the initial start-up operation, the printer will display a message on the operation panel, and the operation may stop. If the operation stops, refer to "Troubleshooting", and take the appropriate actions.

Step 8 : Before start printing, be sure to perform a nozzle check to ensure all nozzles are present. If not, perform the necessary cleaning cycles.

3.2 POWERING OFF CYCLE

Power OFF the printer according to the procedure below:

⚠ Notes ⚠

Please be sure to perform the necessary maintenance before powering OFF the machine.

Step 1 : Verify the following regarding the operational condition of the printer:
- There is no printing operation being performed.
- The operation panel is in the main screen.

Step 2 : Press the [POWER] key of the operation panel to switch OFF the printer.

Step 3 : [Power OFF] will be displayed for a few seconds

Following message is displayed on the operation panel.

- All lamps and the LCD of the operation panel will switch OFF.
- The printer will automatically perform a TubingFlush and power OFF.

3.3 LOADING MEDIA

3.3.1 Loading roll media

Please refer to the User's Guide of the Unwinder/Winder 100 or the T- winder to know how to load roll media.

3.3.2 Loading sheet media

To load sheet media, follow the steps below.

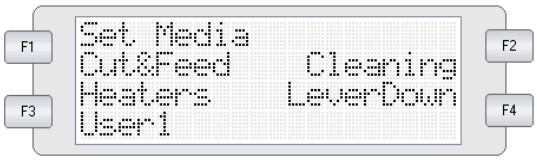
Step 1 : Power ON the printer.

Step 2 : Unload media if necessary.

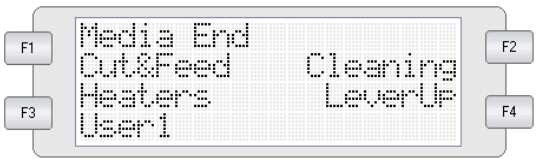
Step 3 : Be sure that the pressure rollers are raised before loading sheet media.

Step 4 : When no media is loaded and …

the pressure rollers are raised, the following message will be displayed.

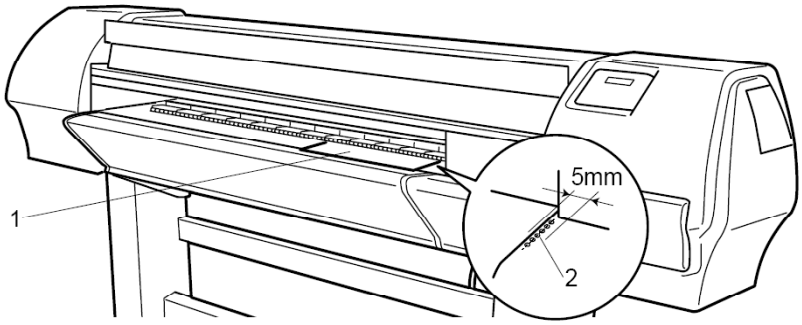


the pressure rollers are lowered, the following message will be displayed.



Step 5 : Open the front cover.

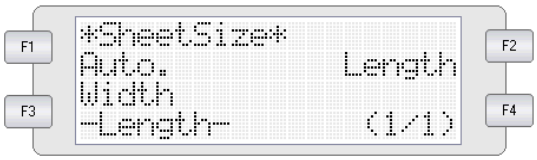
Step 6 : Load a sheet of media at the right side of the printer. Position the media next to the media setting position (line of little holes in the media guide platform). The maximum distance between the guideline and media is 5 mm.



Machine	Minimum Media Width	Maximum Media Width	Printing Width
Spitfire 65 Extreme	A4 (210 mm – 8,27")	1651 mm (65.00")	1640 mm (64.56")
Spitfire 90 Extreme	A4 (210 mm – 8,27")	2240 mm (88.18")	2230 mm (87.79')

Step 7 : Make measurement settings in following menu:

SetupMenu (1/7) ► MediaSet [F4] ► SheetSize



	Menu Choice	Description
F1	Auto	Media measurement sequence ► REAR – RIGHT – LEFT – TOP
F2	Length	Media measurement sequence ► RIGHT – LEFT – TOP Media orientation
F3	Width	Media measurement sequence ► RIGHT – LEFT – TOP Media orientation

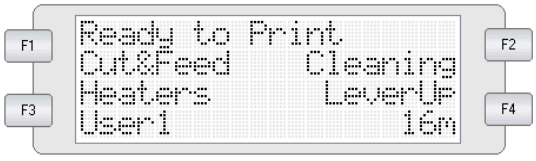
Step 8 : Close the front cover.

Step 9 : Start media initialisation.

	Menu Choice	Description
F2	Sheet / Roll	Select which kind of media is loaded
F3	Lever Up	Raise the pressure rollers if necessary
F4	User 1-8	Select user profile (1-8)
ENTER	Start media initialization	

Step 10 : Media will be measured according to the settings made before.

Step 11 : If the media has been loaded correctly, the following message will be displayed:



3.4 REPLACING INK CASSETTES

⚠ Important ⚠

In case of working with another type of Mutoh ink than described in this manual, refer to the dedicated instruction sheet added to the ink kit.

⚠ Caution ⚠

Before using the ink and cleaning cassettes, be sure to read and understand the msds- sheets which come together with the ink and cleaning cassettes.

3.4.1 Ink cassette behaviour

Please read this chapter thoroughly to know the behaviour of a Mutoh ink cassette used with the Spitfire series printers.

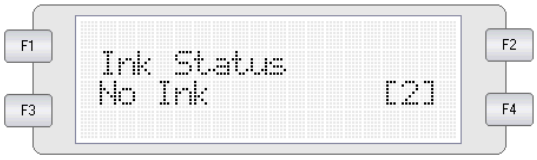
An ink cassette contains 220 or 440 ml of ink. The amount of ink left in the cassette is monitored by the smart chip installed on the cassette. During printing, two ink related messages can be displayed:

Ink Near End – message

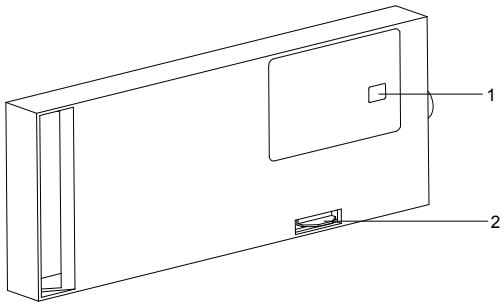
This message will be displayed when there is only 6 % of ink left in the ink cassette. The numbers between the [ ] marks correspond the near empty ink cassettes.

You can print until the [Ink End]-message is displayed. Be sure to have a new cassette at hand.

Ink End – message



This message will be displayed when the flag (2) in the cassette comes out. The cassette has to be changed as soon as possible. The printer will stop all actions. No further action can be taken until you have done the replacement. The numbers between the [ ] marks correspond the near empty ink cassettes.



3.4.2 Types

This printer is designed to use Mutoh Ink cassettes.

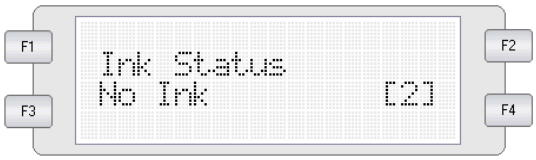
If using other ink cassettes

- Warranty will be void.
- Prints may not reach the expected quality level.
- Heads can be damaged.
- Printer will not recognize these cassettes when inserting (smart chip)

Please refer to the latest price list to know the available ink and cleaning cassettes for the Spitfire Extreme, and for the latest price and part numbers.

3.4.3 Replacement procedure

Step 1 : Remove the empty ink cassette(s) as shown on the screen.



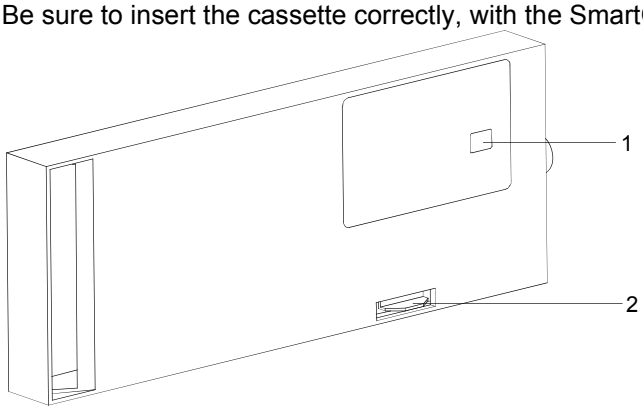
Step 2 : Dispose the used ink cassette by putting it in a plastic bag in accordance with local regulations or laws.

Step 3 : Remove the new ink cassette out of its package.

Step 4 : Insert the cassette in the appropriate slot according to the ink colour configuration label.

Ink Configuration	Ink Cassette Slot Number							
	1	2	3	4	5	6	7	8
2x4	Black	Yellow	Cyan	Magenta	Magenta	Cyan	Yellow	Black
1x6	Black	Cyan	Stabilizer/ Cleaning	Stabilizer/ Cleaning	Yellow	Magenta	Light Cyan	Light Magenta

Be sure to insert the cassette correctly, with the SmartChip-side (1) first and flag (2) pointing right.



Step 5 : The printer will continue printing.

3.5 REPLACING CUTTING BLADE

Read following information on when and how to replace the cutting blade.

3.5.1 Replacement time

Replace the cutting blade under the following conditions:

Media cannot be cut clearly.
When the cut edge is blurred.

3.5.2 Replacement procedure

Follow the steps below to replace the cutting blade.

Step 1 : If the printer is powered ON, verify following items:
Printing or other operations are not performed.
Make sure that the display on the operation panel shows the normal status.
The MEDIA SET light on the operation panel goes off.

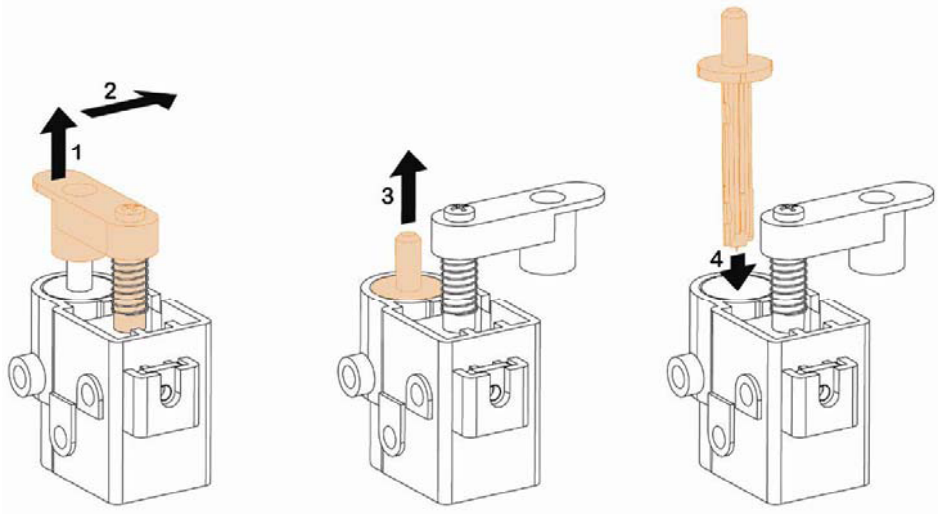
Step 2 : Go to the H. Unlock menu (SetupMenu 5/7) and unlock the head.

Step 3 : Open the front cover.

Step 4 : While pressing the cutting blade holder tab, rotate the cutting blade holder lever in the direction shown on the picture (2).

Step 5 : Take out the cutting blade (3) and insert the new cutter into the media cutting blade holder (4).

Step 6 : While slightly pressing the cutting blade holder tab, return the cutting blade lever to its original position.



Step 7 : Close the front cover.

Step 8 : Press the [ENTER] key on the operation panel.
- The carriage returns to its original position and returns to menu 6/7.

Step 9 : Cutting blade replacement has been finished.

3.6 REPLACING THE WASTE BOTTLE

3.6.1 Replacement Time

Replace the waste liquid tank when following message is displayed.

3.6.2 Replacement Procedures

Follow the steps below to empty the waste bottle.

Step 1 : Open the lid and remove the waste bottle.

Step 2 : As soon as the waste bottle has been removed, the following message appears:

Step 3 : Pour the waste liquid in another bottle and dispose it according to the local regulations.

Step 4 : Replace the waste bottle.

Step 5 : Be sure to close the lid.

Step 6 : Press the [ENTER]-key to confirm that waste bottle is empty.

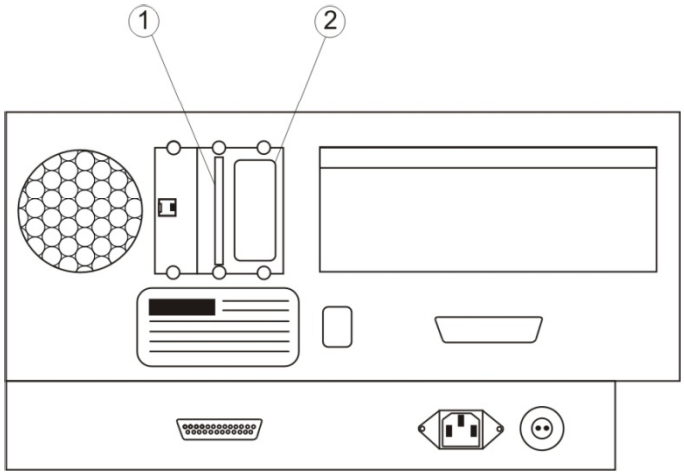
3.7 WORKING WITH MUTOH'S SMARTCHIP MANAGEMENT SYSTEM.

3.7.1 *Introduction*

On each ink cassette, a SmartChip is attached. On this SmartChip, ink volume is stored. When printing, the ink volume will be reduced from the SmartChip.

When working with Mutoh's Bulk Ink System, no SmartChips are attached to the cartridges. Therefore, each bulk ink bottle includes a SmartChip with the necessary ink volume.

The SmartChip management system makes it possible to load this ink volume via the SmartChip slot installed at the back of the printer.



With this feature it is also possible to:

review the remaining ink volume

scan the ink cassette slots for ink volume

⚠ Important ⚠

Do not pull any SmartChip cards from ink cassettes to use them in the reader. The ink volume on the SmartChip cards of the cassettes can be transferred to the SmartChip management system by scanning them one by one. Please find in the next coming chapters more info.

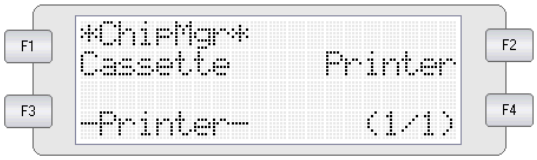
3.7.2 Selecting the correct modes

Depending on printing with ink cassettes or with a bulk ink system, the ink volume has to be transferred in a different way. You can choose between printer and cassette mode in the ChipManager menu:

Please follow the steps to switch between the two modes:

Step 1 : Power ON the unit.

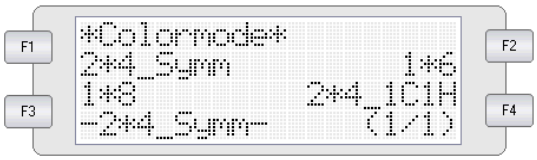
Step 2 : Go to InkManager → ChipMgr to choose between printer and cassette mode



Step 3 : When you have selected cassette mode, you are ready to print, no further settings should be made.

Step 4 : When you have selected printer mode, the colour mode should be set.

Go to SetupMenu 5/7 ► InkManager ► ColorMode



Step 5 : Choose between 2*4_Symm or 1*6

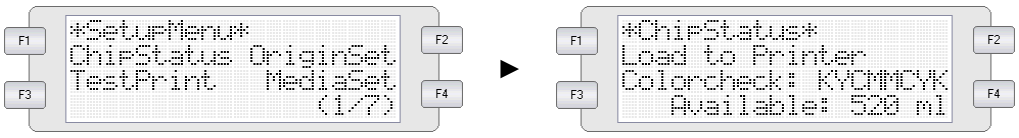
Number of colours		Slot number of ink cassette							
		1	2	3	4	5	6	7	8
4	2x4 colours	Black	Yellow	Cyan	Magenta	Magenta	Cyan	Yellow	Black
6	1x6 colours	Black	Cyan	Transition Liquid	Transition Liquid	Yellow	Magenta	Light Cyan	Light Magenta

3.7.3 Transferring ink volume

3.7.3.1 Via the smart chip reader slot

Please follow the instructions below to transfer the ink volume on the SmartChips to the SmartChip Management System.

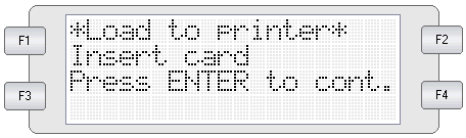
Step 1 : Browse to the ChipStatus menu and press the F1 key.



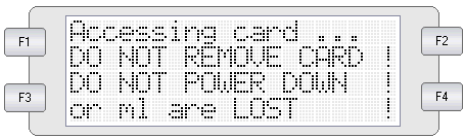
⚠ Notes ⚠

Be sure to be in printer mode, otherwise "ChipStatus" will be replaced by "InkStatus".

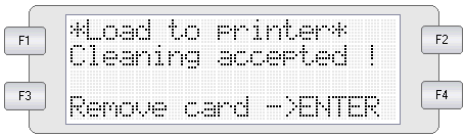
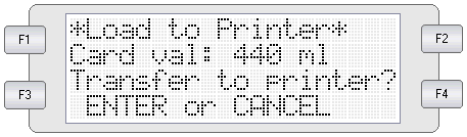
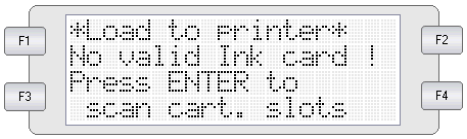
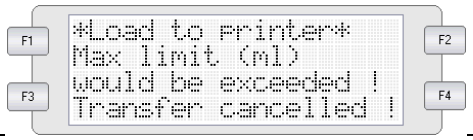
Step 2 : Insert the SmartChip in the reader slot and press the ENTER key.



Step 3 : The system will scan the reader slot.



Step 4 : Perform the correct action based on the displayed message.

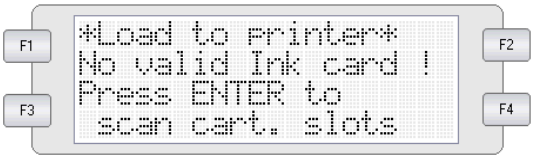
IF…	THEN…
a cleaning card is detected 	Remove the SmartChip card and press ENTER
a valid card is found 	Press ENTER to transfer the ink volume Press CANCEL to quit the operation
no valid card is found 	Remove the SmartChip card. You will be asked if you want to scan the cartridge slots for ink volume. Please refer to the next chapter for all the details.
the total printer chip value exceeds 40 000 ml 	The transfer has been cancelled automatically.

Step 5 : Remove the SmartChip card after the transfer has been finished and press the ENTER key afterwards.

Step 6 : The printer returns to the ChipStatus menu.

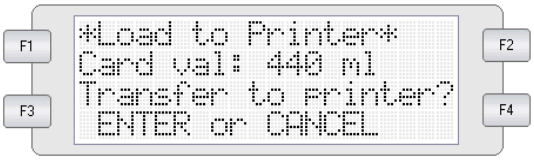
3.7.3.2 Via the Cassette slots of the printer.

When there is no or an invalid SmartChip card inserted, the management system will ask to scan all the cassette slots and transfer the rest ink volume from the SmartChip on the cassette to the management system.

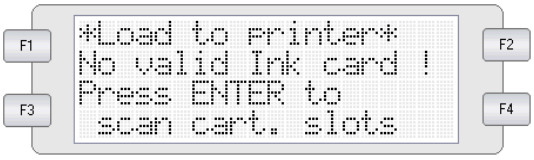


Step 1 : Press the ENTER key to scan all slots.

Step 2 : If ink value is detected on one of the SmartChips, the following message will be displayed. Press the ENTER key to transfer or the CANCEL key to abort.



If there is no ink volume detected, the following message will be displayed



Step 3 : The management system will scan until it found a SmartChip with ink volume, repeat this procedure until no ink volume is found anymore.

3.8 TRANSFER AND TRANSPORTATION

3.8.1 *Transferring the printer*

Following are instructions for transferring the printer.

⚠ Caution ⚠

Keep the printer horizontally during transfer.
Do not tilt the printer, stand it against a wall, or turn it upside down. Doing so may cause ink to leak inside the printer. Also, movement after transport is not covered by the warranty.
Have two or more people to transport the printer.

(1) Before the transfer

If you are using the stand, follow the steps below to transfer the printer.

Step 1 : Make sure the printer is powered OFF.

Step 2 : Make sure the head is in the right edge position (capping position).

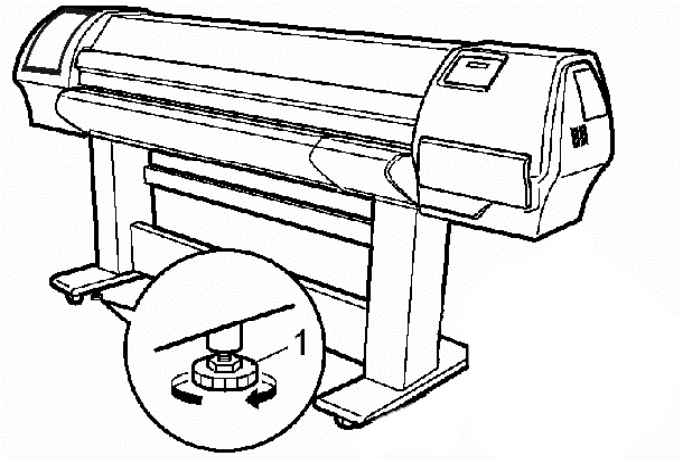
Step 3 : Disconnect the power cable and all other cables

Step 4 : The four adjusters are turned in the direction shown on the diagram.

Step 5 : Transfer the printer.

⚠ Notes ⚠

The caster attached to the stand has been designed for transferring the printer during short distances.



1 Adjuster
2 Caster

(2) After the transfer

Follow the steps below to prepare the printer to be used after the transfer.

Step 1 : Make sure that you place the printer on an adequate place.

⚠ Notes ⚠

For connecting cables, refer to the following.
→ Connecting the power cable
→ Connecting the printer to your PC

Step 2 : Connect the power cable and other cables.

⚠ Notes ⚠

For connecting cables, refer to the following.
→ Connecting the power cable
→ Connecting the printer to your PC

Step 3 : Perform a nozzle check to check if the printer head has clogged.

⚠ Notes ⚠

To perform the nozzle check, refer to "NozzleCheck".

Step 4 : Perform a fine adjustment of image quality.

⚠ Notes ⚠

To perform an adjustment of image quality, refer to "Alignment".

3.8.2 Transporting the printer

When you transport the printer, the printer should be repacked in the original box and packing materials, to protect it from vibration or impact.

The printer should be in long store conditions.

⚠ Notes ⚠

When you transport the printer, contact your local MUTOH dealer for assistance.
To LongStore your printer, please refer to the LongStore menu.

3.9 LONGSTORE

⚠ Caution ⚠

In case of working with other inks than described in this manual, refer to the instruction sheet enclosed with the ink to know if a longstore procedure is necessary, and how to perform the procedure correct.

When transporting your printer or leaving your printer unattended for five days or more, it is highly recommended to LongStore the printer in order not to damage the heads and/or the complete ink system. This means that the complete ink channel system will be filled with Mutoh Mild Solvent cleaning liquid.

Please note that there are LongStore kits available:

For Mutoh Mild Solvent ink configurations KY-80230

N°	Description	Quantity
1	Mutoh Mild Solvent Cleaning Liquid	8
2	Mutoh Mild Solvent ink	
	Black	2
	Cyan	2
	Magenta	2
	Yellow	2

For Mutoh Mild Solvent Plus ink configurations KY-81730

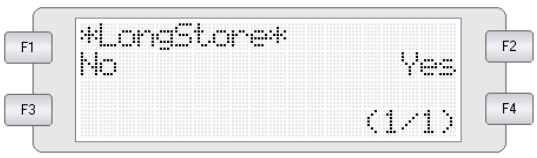
N°	Description	Quantity
1	Mutoh Mild Solvent Cleaning Liquid	8
2	Mutoh Mild Solvent Plus ink	
	Black	2
	Cyan	2
	Magenta	2
	Yellow	2

3.9.1 Procedure for LongStore

Be sure to …

perform the weekly maintenance
perform the daily maintenance
moisten the caps

Before starting the LongStore procedure go to the LongStore menu (SetupMenu 5/7 ► InkManager 2/2 ► LongStore ► F2)



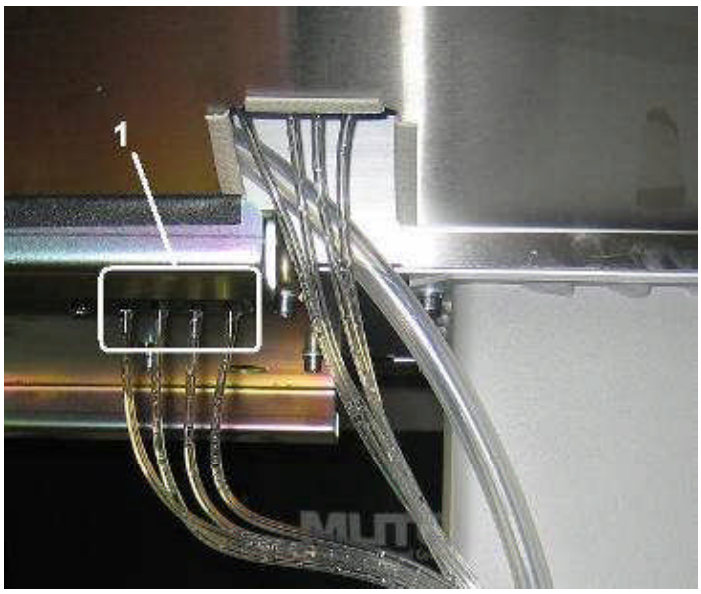
The process consists of several cleaning loadings and several air loadings. On the display of the operation panel a time indication is mentioned on the fourth line.

Message	Duration
Please remove cart.	19 min
Please wait sucking air	
Please insert new Mild Solvent cleaning	
Power OFF	

⚠ Notes ⚠

When a cleaning cassette is empty during LongStore procedure, remove the empty one and replace it by a new one. Only the last cycle will be repeated. Although, the full time (19 minutes) is mentioned again on the panel.

After powering OFF the machine, the tubings in the waste bottle should be mounted on the nipple plate at the bottom of the machine. This to prevent air is coming in the ink system which will dry out the heads.



1 Nipple plate

3.9.2 Starting up after a LongStore

Step 1 : Power ON the machine.

Step 2 : Go to H. Unlock (SetupMenu 6/7 ► H. Unlock ► Yes ► F2).

Step 3 : Moisten the caps with Mutoh Mild Solvent cleaning liquid.

Step 4 : Remove the Mutoh cleaning cassettes.

Step 5 : Insert Mutoh Mild Solvent (Plus) Ink Cassettes in the correct order.

Step 6 : Perform an Ink Load.

Step 7 : Perform a nozzle check and necessary cleanings until all nozzles are present.

Step 8 : Ready to print.

4 PERIODICAL MAINTENANCE

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4.1 DONE BY END USER

⚠ Caution ⚠

In case of working with other inks than described in this manual, refer to the instruction sheet enclosed with the ink to know the periodical maintenance and its frequency.

This section describes the periodical services required for this machine. The periodical services ensure stable printout quality of the machine. In the periodical services, some service parts may be checked, cleaned, or replaced.

Perform periodical inspections according to the table below.

N°	Action	Frequency
1	Clean wipers	Morning and evening
2	Flush caps in maintenance station	Daily maintenance
3	Clean the edges of the caps in maintenance station	
4	Clean the area around the caps	Weekly maintenance
5	Clean around bottom of the heads	
6	Replacing the sponge in the spitting box	2 weekly maintenance
7	Change the wipers	Monthly maintenance
8	Change upper sponge at the back of the capping station	

⚠ Notes ⚠

The accessory kit, delivered with the printer, contains items to perform the periodical maintenance (except for cleaning liquid).
If running out of the necessary maintenance equipment, a user maintenance kit can be ordered. This kit contains all items to perform the periodical maintenance.
Depending on the ink you are currently using, order the correct cleaning liquid.

⚠ Notes ⚠

Above maintenance cycle is based on use:
8 hours / day, 5 days / week and 44 weeks / year.
If machine is used more, maintenance periods will come earlier.

4.1.1 Daily Maintenance

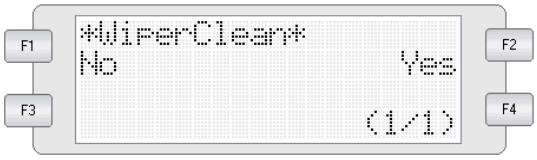
Before every print, perform a nozzle check. If some nozzles are missing or misfiring, perform cleaning cycles until all nozzles are in good shape.
We advise to run a normal or a powerful cleaning cycle to recover the nozzles.

At the end of the day, when you will shut down the printer, the ink has to be removed from some parts, so it cannot harden. Otherwise, some parts will break down or result in bad print quality.

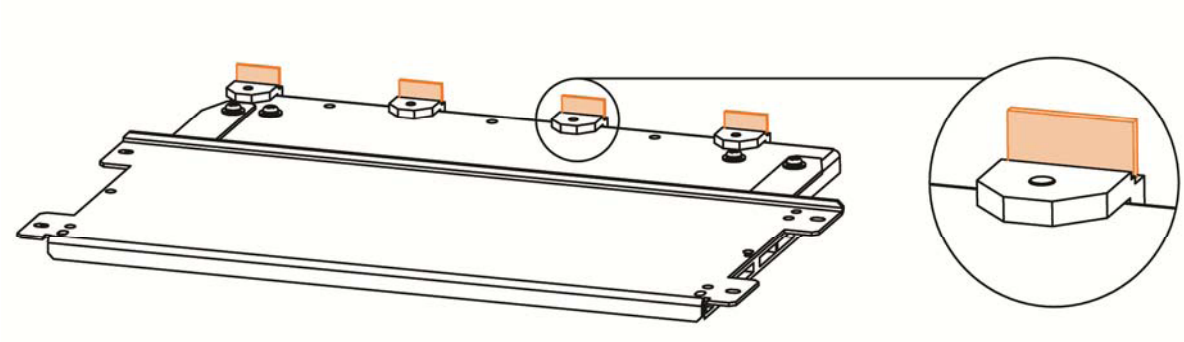
⚠ Notes ⚠

In the box you will find a Good Shape Kit to perform the daily maintenance. Normally this is enough for 6 months. In case you're out of stock, you can order a new kit at Mutoh Order Entry Department. The product code of the good shape kit is KY-80228

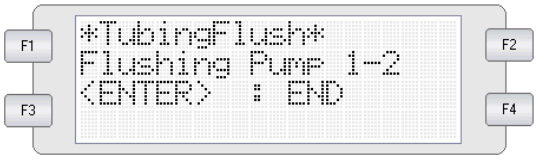
Step 1 : Power ON the printer and go to the "WiperClean-Menu". This will cause the unlocking of the carriage.



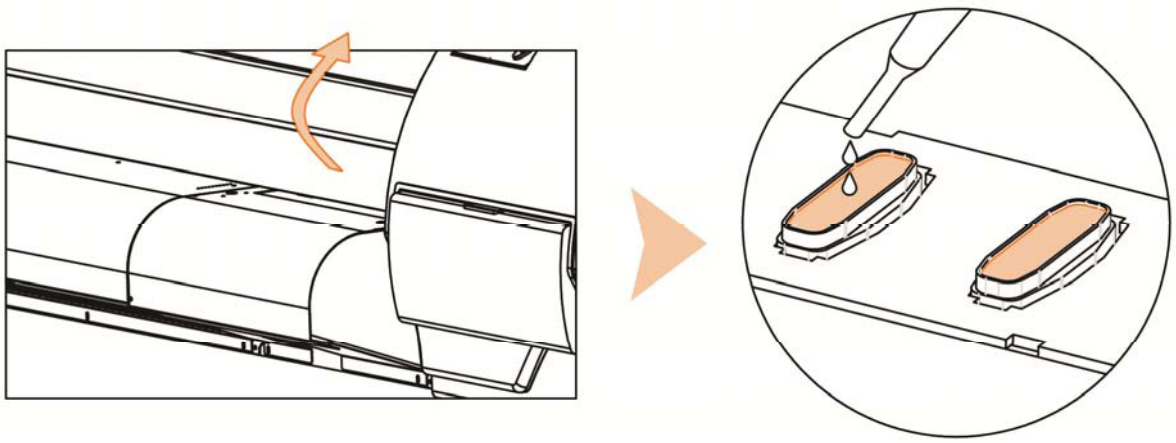
Step 2 : Clean the wipers with a polyknit wiper. Use some Spitfire Cleaning Liquid to remove drops of ink. Be sure to wear gloves.



Step 3 : Perform a tubing flush (F4 in Menu 6/7)

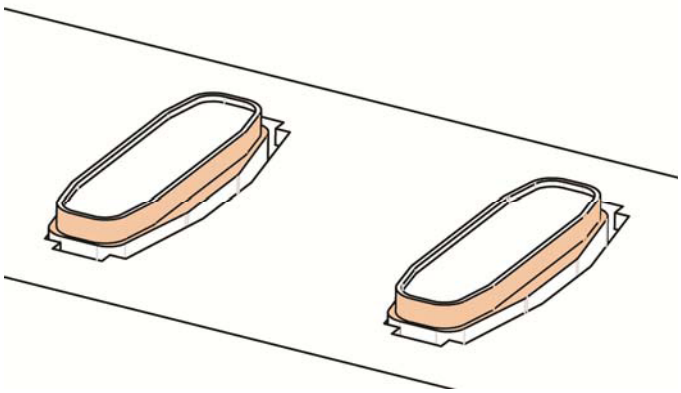


Step 4 : Open the front cover and flush the caps with Spitfire Cleaning Liquid until the mousses do not change from colour anymore.



Step 5 : To stop the tubing flush cycle press the ENTER key.

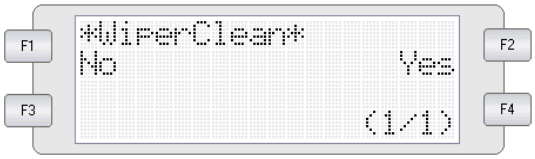
Check if ink is spoiled on the edges of the caps. If so, clean the edges with the cleaning swab and if necessary use some Spitfire Cleaning Liquid. If not clean them every two days.



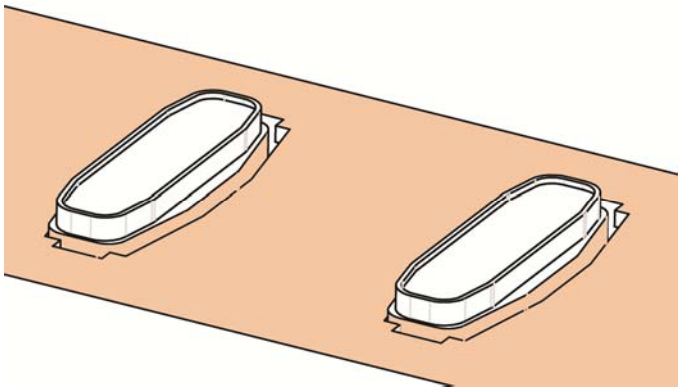
4.1.2 Weekly Maintenance

At the end of the week, ink has to be removed from some parts, so it cannot harden. Otherwise, some parts will break down or result in bad print quality. After performing a weekly maintenance, do not forget to perform the daily maintenance afterwards.

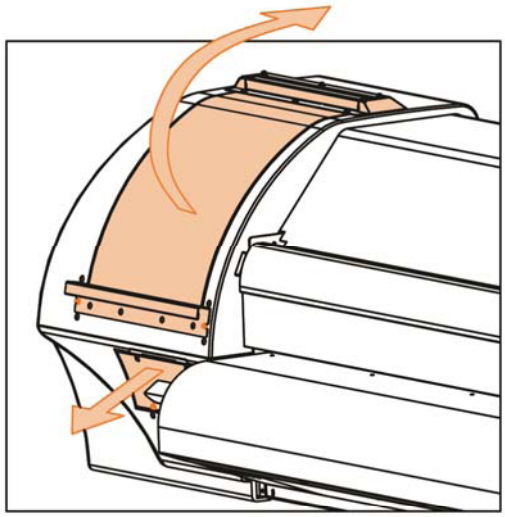
Step 1 : Power ON the printer and go to the "WiperClean-Menu". This will cause the unlocking of the carriage.



Step 2 : Clean the area around the caps with a polyknit wiper. If you see ink, dust or something else, clean it immediately so it can not influence the print quality.

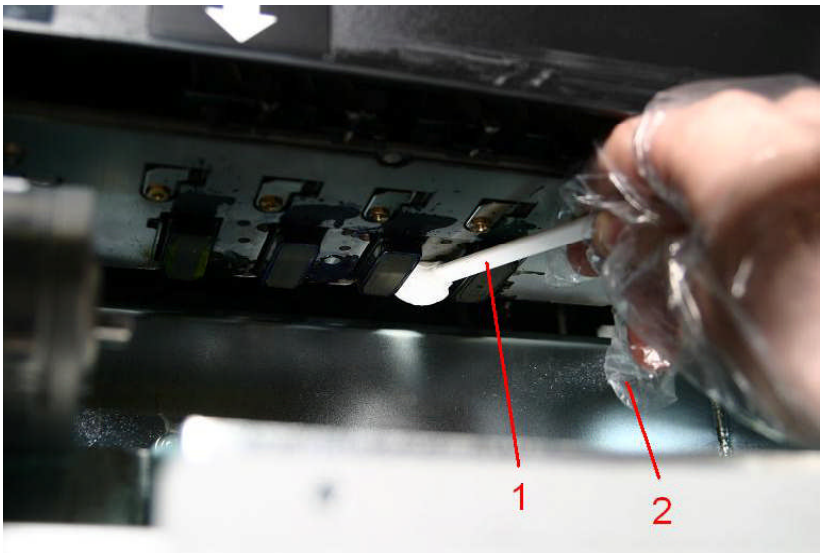


Step 3 : Open the left maintenance covers by loosening the four screws.



Step 4 : Slide the carriage into the left maintenance area.

Step 5 : Clean the edges of the heads with a cleaning swab wetted by Spitfire Cleaning Liquid. Make sure you do not touch, clean the nozzle plate; this would lead to poorer print quality.



1	Cleaning Swabs
2	Gloves

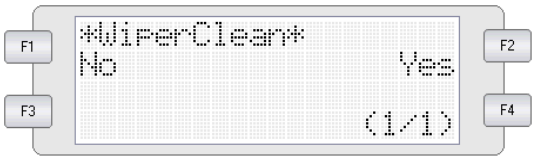
Step 6 : Press the ENTER key when done. The carriage will automatically go to its home position.

Step 7 : Now perform the daily maintenance.

4.1.3 Monthly Maintenance

4.1.3.1 Replacing the wipers

Step 1 : Power ON the printer and go to the "WiperClean-Menu". This will cause the unlocking of the carriage.

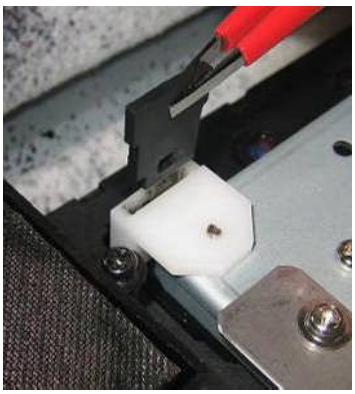


Step 2 : Slide the carriage to the left side of the machine.

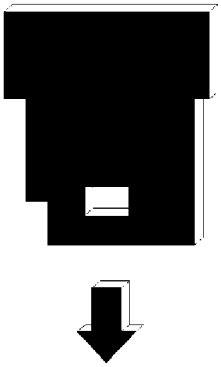
Step 3 : Remove the old wipers with a pair of tweezers

Step 4 : Before inserting a new wiper, moisten the wiper with Spitfire Cleaning Liquid.

Step 5 : Insert the moistened wiper with a pair of tweezers.



Be sure to insert the wiper correctly as shown below:



When standing in front of the machine.

Be sure that the wiper clicks in the wiper holder!

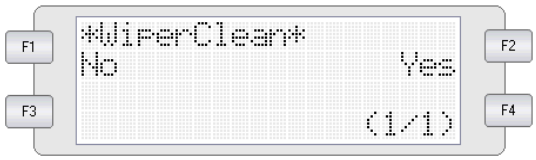
Step 6 : Close the front cover and press the [ENTER] key. The head will cap in.

⚠ Notes ⚠

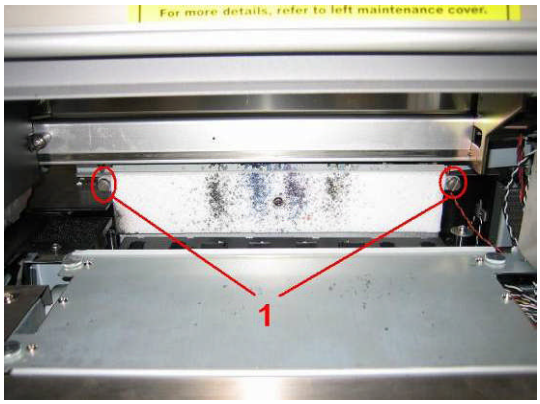
Be careful not to break the lips of the wiper arm while installing the wipers.
Do not touch the wipers with your bare hands to avoid fat or dirt get in contact with the wipers and automatically the nozzle plate. Use a pair of tweezers to avoid this. Clean wipers with appropriate cleaning liquid in case of dirt.

4.1.3.2 Change upper sponge at back of the capping station.

Step 1 : Power ON the printer and go to the "WiperClean-Menu". This will cause the unlocking of the carriage.

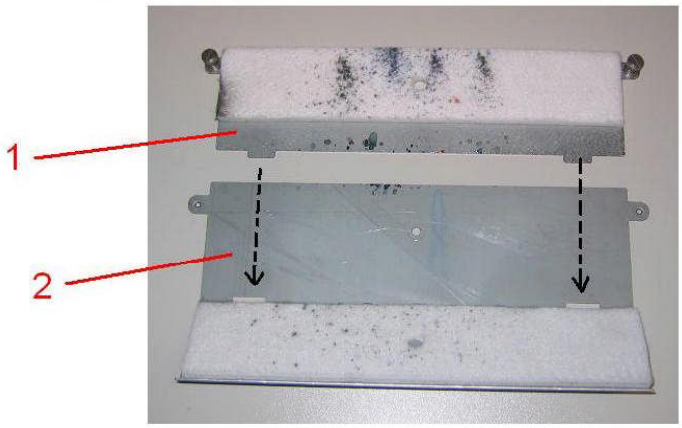


Step 2 : Remove the two screws fixing the sponge.



1	Screws to remove the capping sponge from the plate

Step 3 : Replace the sponge and tighten it again to the plate with the two screws.



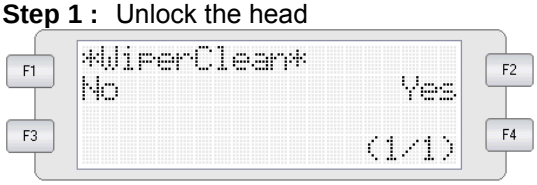
1	Capping sponge
2	Plate

4.1.3.3 Replacing the sponge in the spitting box.

⚠ Notes ⚠

Use gloves and tweezers to change the absorbent in the flushing box.

Step 1 : Unlock the head



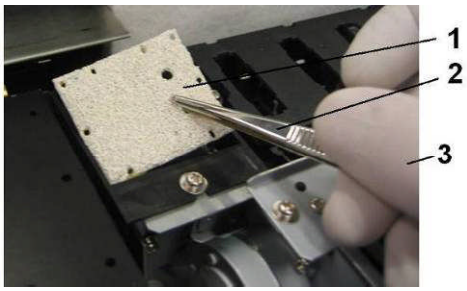
⚠ Notes ⚠

Following display will appear.

After job is done, press the ENTER key, and the head will lock again.

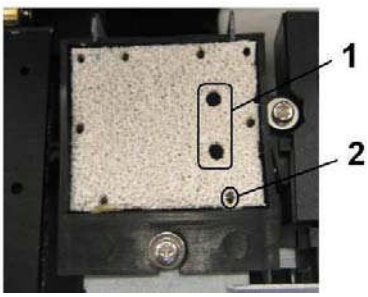
Step 2 : The carriage moves to the waiting position for replacing the flushing sponge.

Step 3 : Remove the old absorbents with tweezers.



1	Sponge (KY-42889)
2	Tweezers
3	Gloves

Step 4 : Install the new absorbents in the flushing box. Make sure that the 2 holes are on the right side of the flushing box and that the pins of the black box are in the holes of the absorbent.



1	Two holes
2	Pin of black box

Step 5 : Lock the head.

4.1.4 Cleaning

You need to clean the printer periodically to keep it in best working condition.

⚠ Important ⚠

Do not insert or drop metal or inflammable objects into openings, such as ventilation outlets. Doing so may result in electrical shock and fire.
Stop using your printer if a liquid is spilled into it. This may cause electrical shock or fire. Power the printer OFF as soon as possible, unplug the power cord and then contact your local MUTOH dealer.

⚠ Caution ⚠

Be sure to power OFF the printer and unplug the power cable from the outlet before cleaning the printer.
Do not use thinner, benzene, alcohol or other active agents. Doing so may result in damage or paint peeling from the casing.
Be careful not to spill water inside the printer. Doing so may result in a short circuit.

Following are instructions for cleaning the printer.

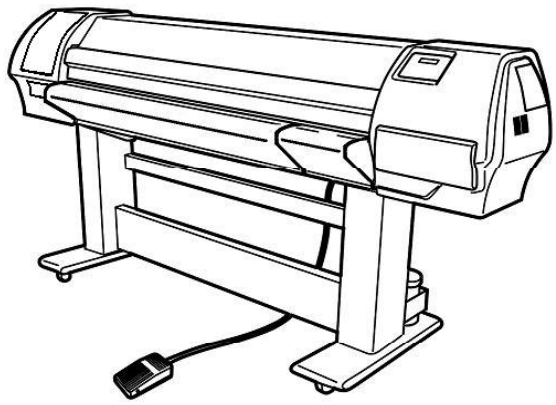
4.1.4.1 Cleaning the outer case

(1) Cleaning frequency

Clean once a month.

(2) Cleaning procedure

Remove dust or smudges on the outer case with a soft cloth.



4.1.4.2 Cleaning the inside of the printer

(1) Cleaning frequency

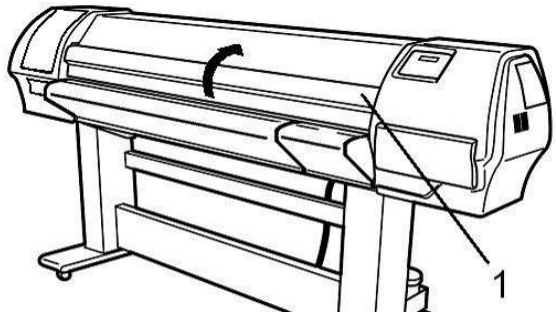
Clean once a month.

(2) Cleaning procedure

The following are instructions for cleaning the inside of the printer.

Follow the steps below.

Step 1 : Open the front cover.



1 Front Cover

Step 2 : Use a soft brush to carefully clean away any dust or dirt on the pressure rollers.

⚠ Notes ⚠

Do not blow off media dust inside the printer using an air dusting machine. Doing so may cause noise to occur from inside the printer.

Step 3 : Use a cloth soaked in cleaning liquid and squeezes it well, wipe off media dust and ink from the platen.

4.1.4.3 Head cleaning

If printouts become faint or partially missed, perform head cleaning to clean the surface of the head and the nozzles.
Follow the steps below to perform head cleaning.

⚠ Notes ⚠

Remove media before performing head cleaning.
If you perform head cleaning with media installed, the head may contact the media.

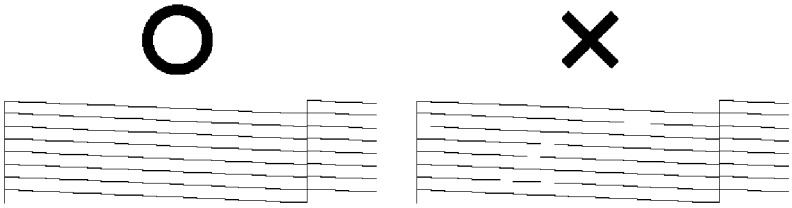
Step 1 : Make sure that the state of the product is normal.

⚠ Caution ⚠

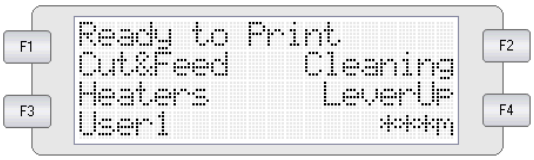
Be sure not to pinch your fingers while opening and closing the front cover.

Step 2 : Refer to "TestPrinting" to perform nozzle check printing.

Step 3 : Check if the print head, referring to the diagram below.



Step 4 : Check the printer is in the main screen.



Step 5 : Press the [F2] key on the operation panel.

The printer enters the cleaning menu.

Step 6 : Press the [F2] key on the operation panel to change the parameters.

Key	Parameter	Description
F2	Small	Small cleaning is performed.
	Normal	Normal cleaning is performed.
	Strong	Strong cleaning is performed.

Step 7 : Press the [ENTER] key on the operation panel to start the head cleaning.

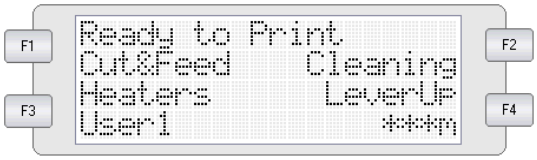
⚠ Notes ⚠

If the [Cancel] key has been pressed instead of the [ENTER] key after changing the parameters, the printer returns to the main screen without performing a head cleaning.

Step 8 : When the head cleaning has been completed, the printer returns to the main screen.

⚠ Notes ⚠

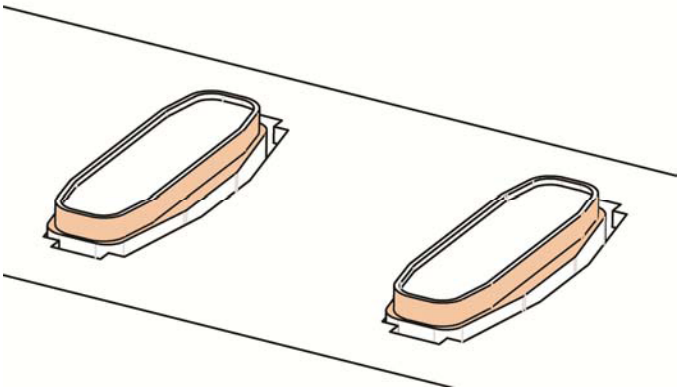
We advise to let the printer rest for 5-10 minutes after a head cleaning procedure. During that time, the Spitfire ink comes to a fully stabilized condition, improving print quality considerably.



Step 9 : Perform a nozzle check again and check the print head.

⚠ Notes ⚠

When there are still some missing nozzles after some cleanings, it could be possible that the ink cycle is not completely airtight. To solve this moist the sides of the caps and perform a new cleaning.



Moistening the caps can be done by unlocking the head with the TubingFlush menu.

After moistening the caps perform another cleaning and NozzleCheck until no missing nozzles are established any more.

4.2 DONE BY AUTHORISED MUTOH TECHNICIAN

⚠ Caution ⚠

In case of working with other inks than described in this manual, refer to the instruction sheet enclosed with the ink to know the periodical maintenance and its frequency.

An Authorized Mutoh technician should check and replace some components of your printer on frequent base (every 6 and 12 months).

Be sure to remind your distributor when the replacements should be done.

It is very important not to skip a maintenance intervention in order to maintain constant print quality and to keep your warranty.

Please refer to the table below to know what the Authorized Mutoh technician should do.

N°	Action	Frequency
1	Changing the dampers	Every 6 months
2	Changing the spitting box + tube + L connection	
3	Applying grease on the head up-down cams when needed	
4	Applying grease on the Y-motor belt if needed	
5	Applying grease on the roller path carriage if needed	
6	Applying grease on the capping station cam and gears if needed	
7	Removing dust in the fan area underneath the print platform	
8	Changing the pumps	
9	Changing the tubes from the pumps to the waste bottle	Every 12 months
10	Change wiper arm assembly	
11	Changing the maintenance station	

⚠ Notes ⚠

Above maintenance cycle is based on use:
8 hours / day, 5 days / week and 44 weeks / year.
If machine is used more, maintenance periods will come earlier.
Please refer to the latest spare part price list for the part numbers of the maintenance kits.

5 PREPARATIONS BEFORE PRINTING

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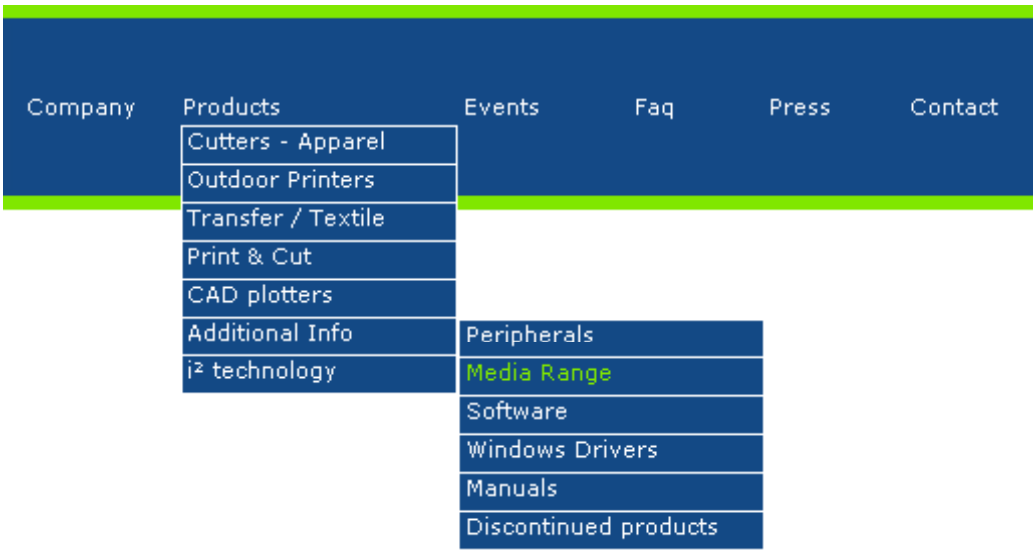
5.1 USING MEDIA

This section describes details on available media for the printer.

5.1.1 Media range

Please refer to Mutoh's website (www.mutoh.eu or www.mutoh.be) for the media compatibility lists for all our products.



For a FULL overview of today's Mutoh Media Range, in which you will find not only order codes, media type, basic description, width and length, but also compatibility of each individual media type with the different Mutoh inks/printers, click here: http://www.mutoh.be/01/MyDocuments/Mutoh_Media_Range.xls.

For further specifications of Mutoh media and media compatibility of leading media manufacturers, please refer to the topics below:

Mutoh's genuine media - specification sheets
Media compatibility

For media, Mutoh has a twofold approach. In the first place, Mutoh is permanently in contact with the leading media manufacturers to define and fine-tune their media in combination with the Mutoh printers.

Secondly, for the first-time users or users who do not want to go through the hassle of searching, testing and profiling media, Mutoh provides an own range of specially developed media for the Mutoh printers. As a result of Mutoh's in-house extensive media test program, there is media targeted at outdoor applications, media aimed at indoor applications where long-term indoor lifetime expectancy of the output is required and media specially designed for making colourful banners.

Free of charge, Mutoh provides you ICC profiles targeted for use with the printer's ink and media range. These free of charge ICC profiles are at all times accessible under each product page.

5.1.2 Cautions on handling media

When you handle media, please pay attention to the following:

Use recommended media in an appropriate environment. Following are the appropriate temperature and humidity ranges for printing.

	Temperature	Humidity
Recommended working environment	20-30°C	40% to 65%
Rate of change	Within 2°C per hour	Within 5% per hour

Do not use creased, damaged, torn, curled, or wrapped media.

Temperature changes will influence the size of media that is used. Before using sheet media, place the sheet in the working environment to have it match to the temperature of the working area.

Printing before the media has been able to accommodate to the printing environment may cause media jams due to slippage or creases. This also adversely affects the quality of printing.

Media has a printable side and a non-printable side. If you print on a not printable side, blurring or slight touching may occur.

Do not touch the printable side of media. Moisture or oil from hands affects the printing quality.

Do not leave the printer for a long time with media loaded. The media may curl, resulting in misalignment, media jams, or decreased printing quality. In particular, avoid this in winter, dry seasons, or during final printing.

Do not throw away the box or wrapping bag for storing media.

5.1.3 Precaution on storing media

When storing media, pay attention to the following.

Do not store media in high temperature, high humidity, or direct sunlight.

Store sheet media in the original bag after unpacking.

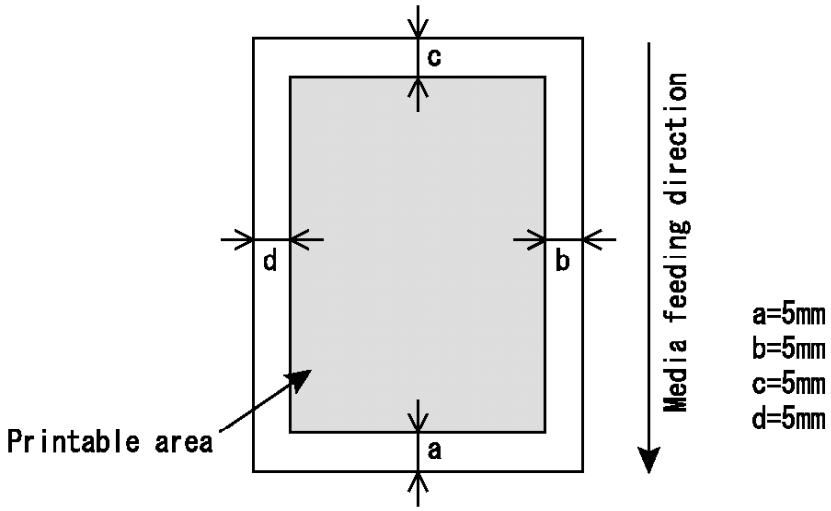
Unused roll media must be removed from the scroller, rewound tightly, and stored in the original wrapping bag and the box.

Do not wet media.

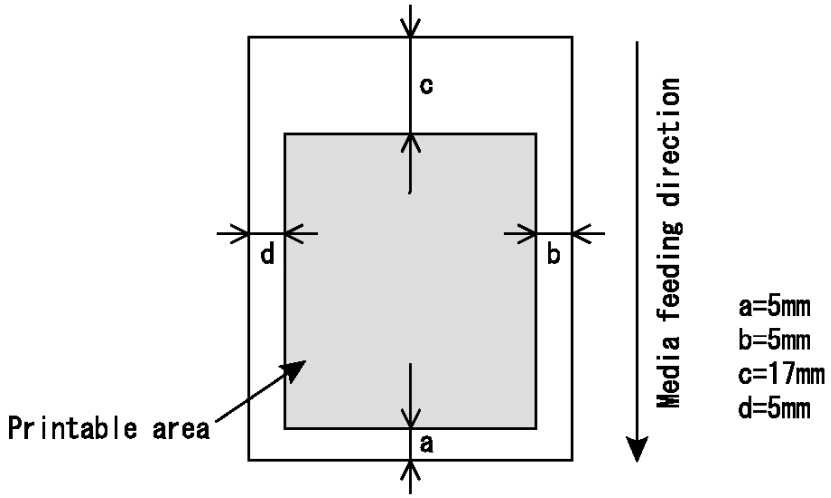
5.1.4 The printing area

The printing area is shown below.

(1) Roll media



(2) Sheet media



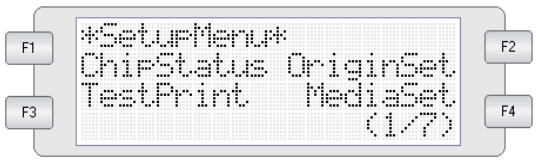
5.2 TESTPRINTING

Follow the steps below to do a test print and confirm if your printer operates correctly.

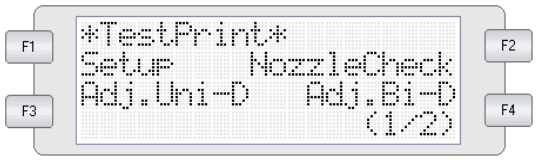
Step 1 : Power ON the printer and load media.

Step 2 : Make sure that your printer is in the main screen.

Step 3 : Press either the [MENU↑] key or [MENU↓] key on the operation panel.
The setup menu is displayed.



Step 4 : Press the [F3] key on the operation panel.
"TestPrint: SetupPrint" is displayed on the LCD.

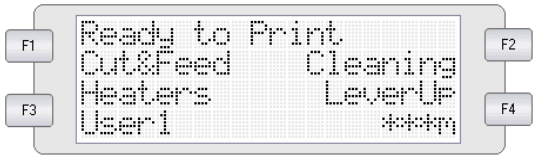


Step 5 : Select an item and press the appropriate key.

Setup items	Parameters	Description
Test print (1/2)	SetupPrint	Performs setup printing.
	NozzleCheck	Performs nozzle check printing.
	Alignment (UniDir)	Performs accuracy adjustment printing in one direction.
	Alignment (BiDir)	Performs accuracy adjustment printing in two directions.
Test print (2/2)	Palette printing	Performs palette printing.
	Maintenance status	Maintenance status printing is performed.
	Distance Adj. Check	Print distance adjustment check pattern
Test print (1/2-2/2)	-	[CANCEL] key: shift to the previous hierarchy menu.

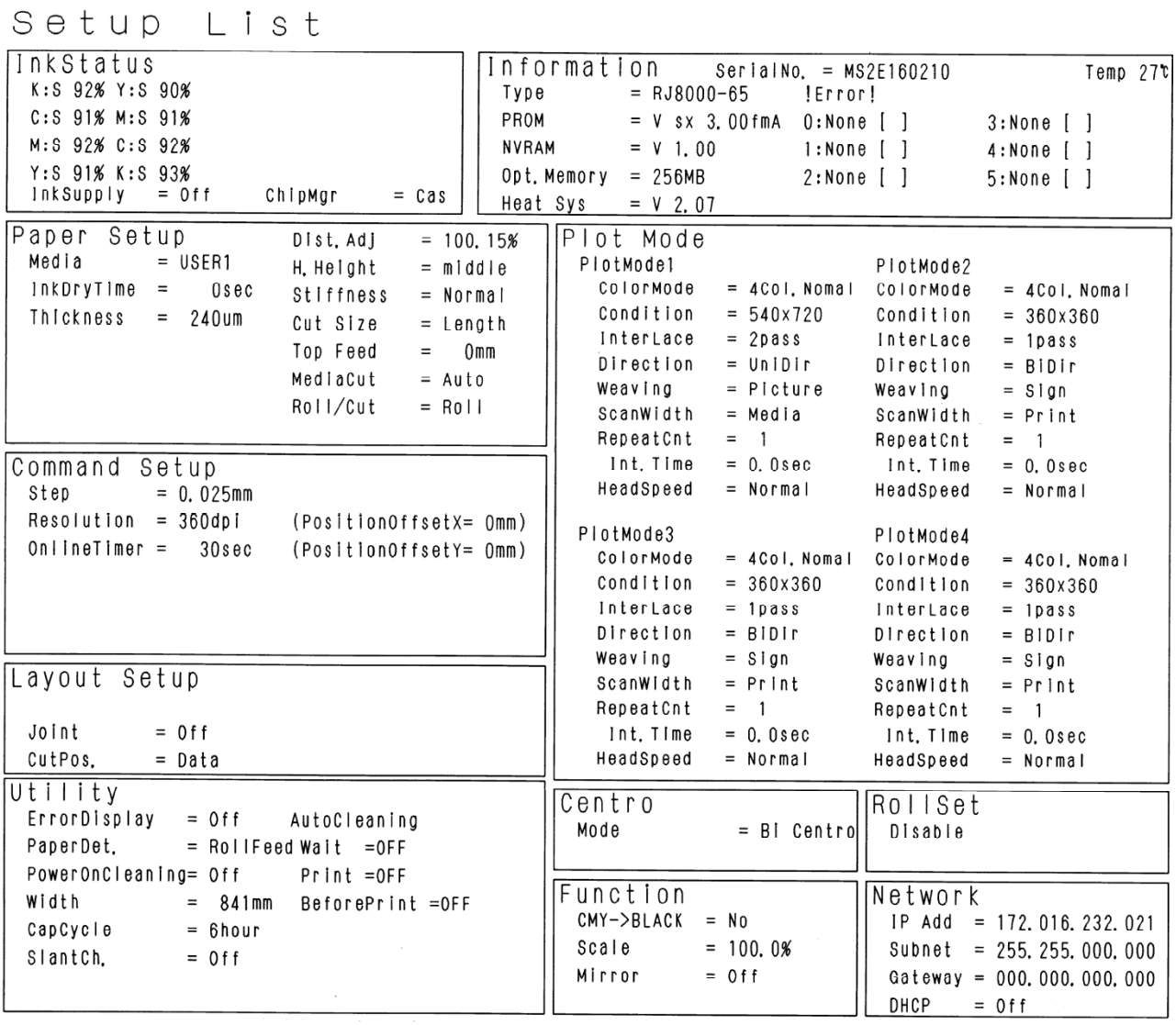
Step 6 : Print the information on the selected item.

Step 7 : After printing, the printer returns to the main screen.



5.2.1 Setup List

Use this function to check the current status of the printer.

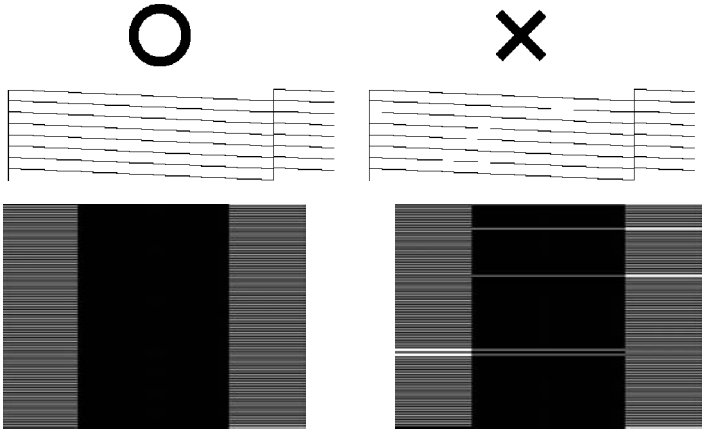


5.2.2 NozzleCheck

Use this function to check if there is any clogging of nozzles, missing dots or faint printing.

⚠ Notes ⚠

If printing quality declines, or if missing dots are evident after the NozzleCheck, the print heads need to be cleaned. Refer to "Head cleaning" to perform head cleaning. After finishing the head cleaning, wait for 10 minutes and perform the NozzleCheck again.



5.2.3 Alignment

Use this function to adjust the print quality for best results.

⚠ Notes ⚠

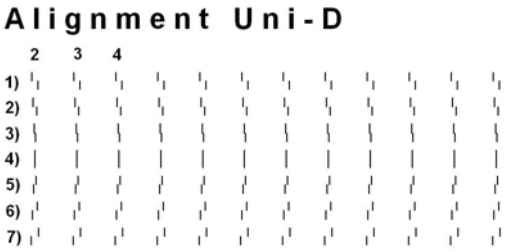
The print quality of your printer is pre-adjusted when it is shipped. When the installation environment of the printer or media type has been changed and print quality declines, use this alignment function.

To do the Alignment, follow the steps below.

Step 1 : Power ON the printer and load media.

Step 2 : Perform an accuracy adjustment printing for alignment according to "TestPrinting".
When performing uni-directional printing: Alignment (for the uni-direction printing)
When performing bi-directional printing: Alignment (for the bi-direction printing)

Step 3 : From "Head A" in the printing sample, select a number in which the straight line appears with the least blur.



Step 4 : Press either the [F2] key or [F4] key to select the number of the line you choose in the previous step.

Step 5 : Press the [Enter] key on the operation panel to register the setting value of "Head A".

Step 6 : Repeat the steps from 3 to 5 to register all settings followed "Head A".

5.2.4 Colour palette

Use this function to compare the colour settings of the computer print colour of the printer.
This palette is printed in the mode you are currently working (PrintMode settings).
We recommend printing the palette in 360x360.

5.2.5 Maintenance record

Use this function to check the life cycles of the printer parts.

⚠ Notes ⚠

A part's life cycle is shown by the amount of the * mark. When a part's life cycle comes to an end, the * mark reduces.

```
========== Maintenance Record ==========
Version             : sx 3.00fmA
Ink Cart.1          : E******F
Ink Cart.2          : E******F
Ink Cart.3          : E******F
Ink Cart.4          : E******F
Ink Cart.5          : E******F
Ink Cart.6          : E******F
Ink Cart.7          : E******F
Ink Cart.8          : E******F
Cutter Life         : E******F
Page Count          : 1238
Waste Ink           : E**** F
CR Motor Life       : E******F
PF Motor Life       : E******F
Head Life           : E******F
Cleaner Life        : E**** F
Pump Life           : E******F
Head Unlock         : 67
Media Feed          : 2199
ChipMgr Printer     : 0
ChipMgr Printer Log : 0
ChipMgr Printer Log : 2000
ChipMgr Printer Log*: 108
ChipMgr Printer Log : 0
ChipMgr Printer Log : 0
ChipMgr Printer Log : 0
ChipMgr Printer Log : 0
ChipMgr Printer Log : 0
ChipMgr Printer Log : 0
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ChipMgr Printer Log : 0
ChipMgr Printer Log : 0
ChipMgr Printer Log : 0
ChipMgr Printer Log : 0
```

5.3 SET THE CORRECT DISTANCE ADJUST (STEP)

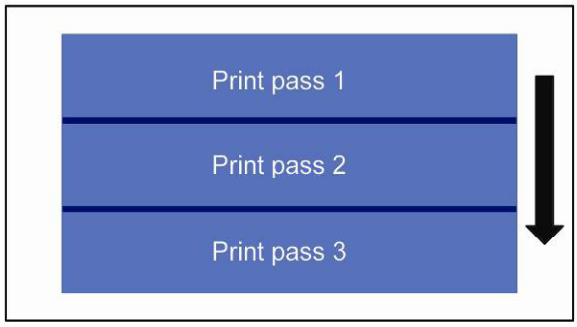
Obtaining constant printing quality on a wide-format Piezo inkjet printer is not only determined by the working environment, the RIP, the profiles, the inks and the media which are used. One of the key factors for obtaining constant output quality is the correct distance adjustment, also called "step", on your Mutoh inkjet printer.

5.3.1 Basics about the step

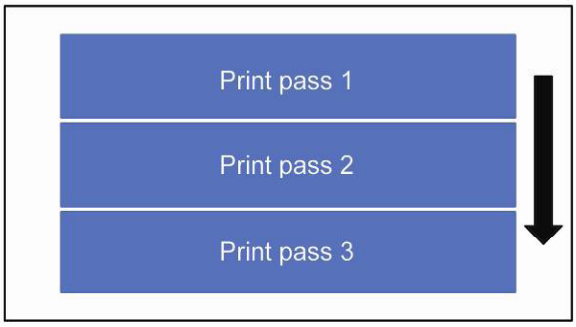
Every image is printed in several print passes. After every pass, the media is fed an amount of millimetres. When the step is not set correctly, the passes will overlap each other or will not be printed precisely next to each other, which results in white bands between two print passes.

Therefore a function, distance adjust (or step), is added to the menu to control this feed operation.

Refer to the table below for visual support



print direction

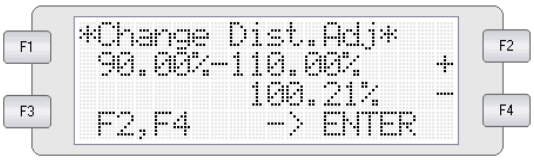


UNDERFEED = step between the print passes is too small which results in the passes to overlap each other.

OVERFEED = step between the print passes is too large which results in the passes to be printed too far from each other.

⚠ Notes ⚠

It is recommended to start printing with a step of 100.00% and to adjust it afterwards. Once a step is set for a particular media it will not change on following conditions:



The step is only applicable on the printer in question and not interchangeable.
The media manufacturer does not change any specifications (especially backing) of the media.
The unwinder/winder 100 is used.

Please refer to the next chapter to know where and how to change the step.

5.3.2 How to determine and change the step

Step 1 : Power ON the printer.

Step 2 : Load the media to print on.

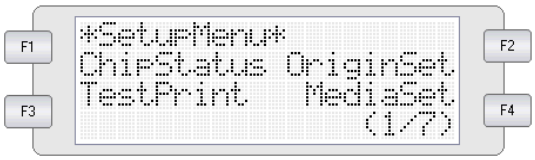
⚠ Notes ⚠

Be sure to tighten the media to the winder 100 before setting the step. This because the step will be different when printing roll-to-sheet than when printing roll-to-roll.

Step 3 : Perform a NozzleCheck to be sure all nozzles are present. If not, perform the necessary cleanings.

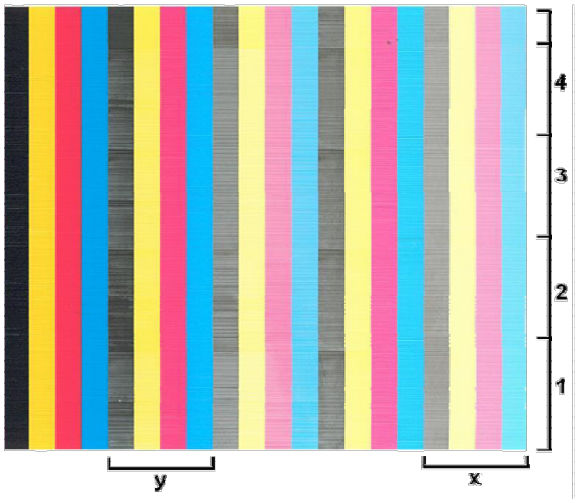
Step 4 : Set the step to 100.00%

Step 5 : Print the test pattern. (SetupMenu 1/7 > TestPrint [F3] > Dist.Check [F2])

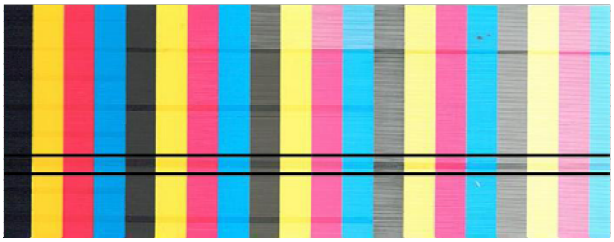


▼

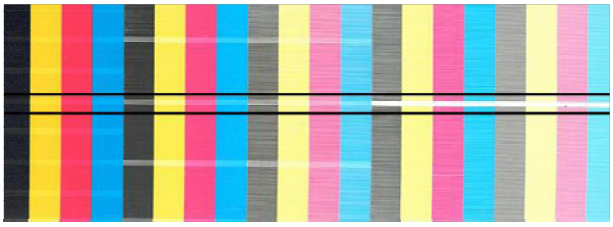
Step 6 : To evaluate the print, you should look for gaps or overlaps between the different passes (1-4). The direction of the adjustment (increase or decrease the step adjust value) is the easiest to check in the X-rows. To check the quality, the Y rows should be the standard.



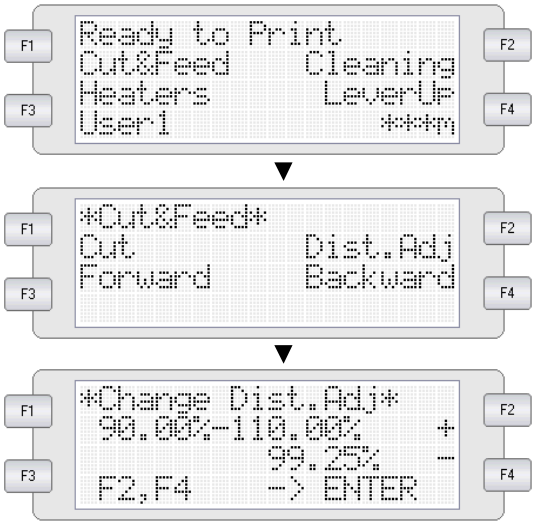
Step 7 : Step is too small ► overlap visible between passes



Step is too big ► gap visible between passes



Step 8 : Change the step if necessary.



Step 9 : Print the test pattern again until no gap or overlap is visible anymore.

5.3.3 How to change the step on the fly.

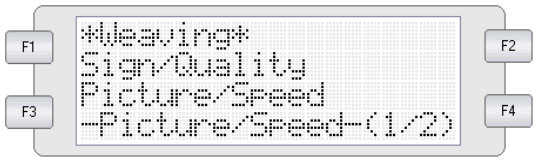
Step 1 : Press F1 while printing.

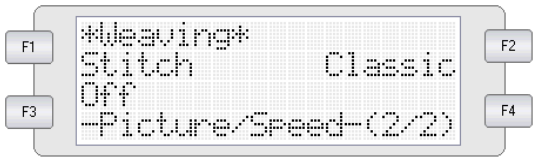
Step 2 : Press F2 or F4 to change the step.

5.4 I² TECHNOLOGY

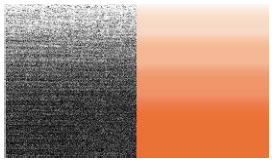
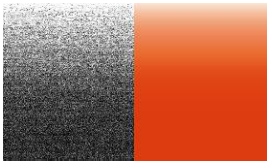
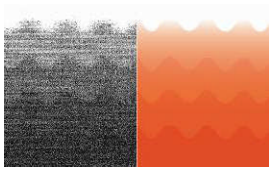
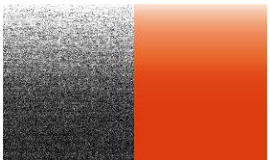
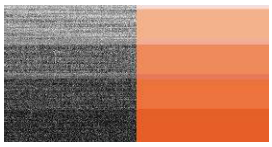
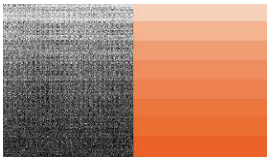
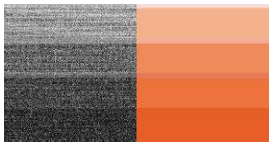
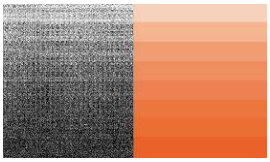
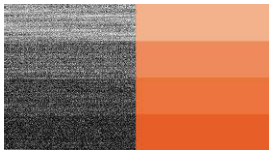
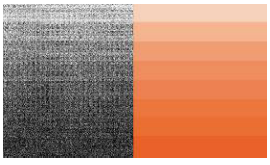
Without weaving ON, an image is completed (formed) by printing a series of complementary rectangular shaped stripes (bands, swaths, passes). Inherent to classic inkjet printing is that ink drying effects, stepping mismatch, miss firing nozzles show up in the printed image via ink bleeding and various types of banding. By switching ON one of the weave patterns you will give the traditional rectangular print swaths a wave-shaped look that will save you time and boost your output quality. Difficult images will print smoother, banding will be suppressed (neutralized) and you will have to spend less time fine-tuning your printer to create great looking output.

Moreover, when using wave-tuned profiles, you will be able to boost your printer's colour gamut as the i² (intelligent interweaving) technology allows depositing more ink, helping you to achieve higher colour densities.





Setup items	Parameters	Description
Weaving (1/2)	Sign / Quality	Please refer to the table below to know what the different weaving forms are and which one to use.
	Picture / Speed	
Weaving (2/2)	Stitch	
	Classic	
	Off	
Weaving (1/2 – 2/2)	-	[CANCEL] key: To shift to the previous hierarchy menu.

Weaving method	User Tip	Print Modes Supported	2 pass	4 pass
Sign / Quality	Preferred setting for signage/poster applications containing big areas with solid colours or critical gradients and for photo quality output on coated media. (small loss of speed in 2 pass modes)	720x720: 2 pass, 4 pass 540x720: 2 pass, 4 pass Default selection after firmware installation		
Picture / Speed	Preferred setting for non-sign images, pictures, continuous tone data. (no speed loss)	720x720: 2 pass, 4 pass 540x720: 2 pass, 4 pass (*) 4-pass is a quality mode and will always use a tuned sign weave pattern, even if picture is selected from the panel / RIP.		
Stitch	Creates a fine print swath overlap. Mildly improves print quality versus "Off" setting. (lowest level of interweaving)	720x720: 2 pass, 4 pass 540x720: 2 pass, 4 pass (*) 4 pass data will be printed as classic		
Classic	Use classic to maintain classic printer behaviour in all print modes. (prior to firmware version 3.01)	All print modes		
Off	Switches off any kind of overlap/weaving. Useful when trying to inspect individual nozzle behaviour or checking the step-adjust.	All print modes		

5.5 PRINTING FLOW

The following flowchart gives you a view on which steps should be taken to make a print. This is a very short summary of what should be done.

Select media
(Refer to the media compatibility lists on www.mutoh.be)

▼

Load media
(Refer to the chapter "Loading Media")

▼

Perform NozzleCheck and cleanings if necessary
(Refer to the chapter "TestPrinting")

▼

Set step
(Refer to chapter "Set the correct distance adjust")

▼

Select image

▼

Load dedicated profile (∗) and rip image
(Refer to profiles section on www.mutoh.be)

▼

Decide which weaving pattern should be used (sign/picture)
(Refer to chapter "i² technology")

▼

Print image

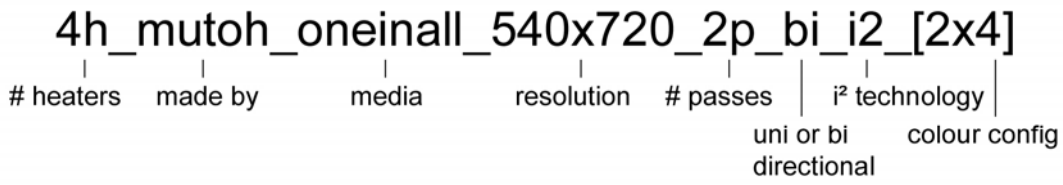
∗ It is highly recommended to use one of the profiles Mutoh is making available on the website. A lot of parameters are included.

The most important ones are:

Ink an colour management related	**PrintMode related**	**Media related**
Ink Restrictions	Resolution	Heater settings
Linearization	Amount of passes	Media thickness
Ink limits	Unidirectional – Bi Directional	HeadHeight
ICC Profile	Weaving ON – OFF	

The file name of each profile is build up in the same way

For example



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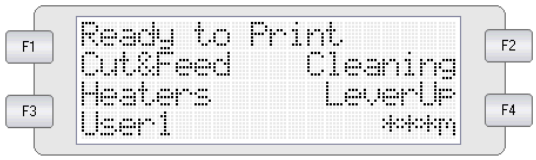
6.1 HOW TO WORK IN THE MENU

Please find below all necessary information on how to switch, select and cancel menu items.

6.1.1 Main screen

When powering ON the printer, it will (when no errors occur) start up in its main screen. The function of each key is explained below

1 →
2 →
4 →
6 →



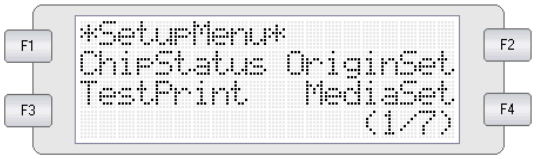
← 3
← 5
← 7

N°	Position	Description	Example
1	1st line	Displays the current status of the printer.	Ready to print
2	Left of 2nd line	Displays the function assigned to [F1] key	Cut&Feed
3	Right of 2nd line	Displays the function assigned to [F2] key	Cleaning
4	Left of 3rd line	Displays the function assigned to [F3] key	Heaters
5	Right of 3rd line	Displays the function assigned to [F4] key	Lever Up
6	Left of 4th line	Displays the currently set media type	User 1 – 8
7	Right of 4th line	Displays the approximate amount of remaining media in meter. However, the amount is displayed only when either "Roll media 1", "Roll media 2", or "Roll media 3" is selected in the Roll media setting menu.	30 m

6.1.2 Menu screen

In the SetupMenu, changes can be made to the printer settings.
The content displayed on the LCD monitor of the operation panel is as follows:

1 →
2 →
4 →



← 3
← 5
← 6

N°	Position	Description	Example
1	1st line	Displays the setting menu name currently set.	SetupMenu
2	Left of 2nd line	Displays the function assigned to [F1] key.	InkStatus
3	Right of 2nd line	Displays the function assigned to [F2] key.	OriginSet
4	Left of 3rd line	Displays the function assigned to [F3] key.	TestPrint
5	Right of 3rd line	Displays the function assigned to [F4] key.	MediaSet
6	4th line	Displays the currently available functions of the [F1] key to the [F4] key or displays the page status if there are multiple pages for the currently displayed setting menu.	1/7

6.1.3 Changing between the screens

To change the printer status, follow the steps below.

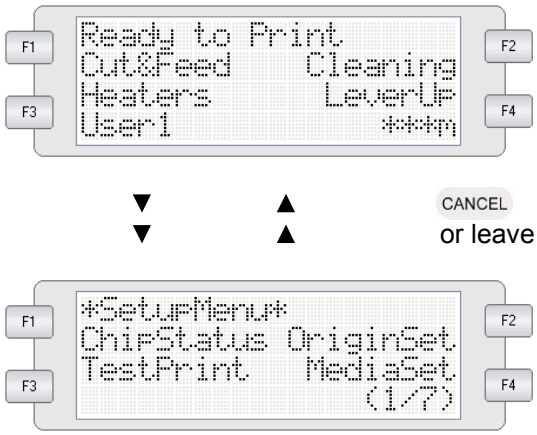
6.1.3.1 From main screen to menu screen

Press either ▲ or ▼ on the operation panel when the printer is in the main screen to go to menu screen 1/7 – 7/7

6.1.3.2 From menu screen to main screen

To switch from a menu screen to the main screen, following actions can be taken:

Press the [CANCEL] key on the operation panel.
Leave the printer for 3 minutes when the status is in the setting menu display.



▲ or ▼ ▼ ▲ ▲ CANCEL or leave the printer idle for 3 minutes

6.2 OPERATION PANEL IN STANDBY MODE

This section describes functions operated on the operational panel when the printer is in the normal status.

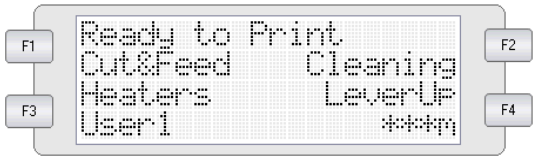
⚠ Notes ⚠

For information of the name and function of each key, refer to "Operation panel".

6.2.1 [F1] – Feeding, Cutting media and Step Adjust

When you want to feed media forward or backward, follow the steps below:

Step 1 : Verify the following regarding the condition of the printer.
It is not currently printing



Step 2 : Press the [F1] key of the operation panel.
To shift to the Cut&Feed menu.

Step 3 : Press the [F3] key or the [F4] key on the operation panel.
The product will perform following operations:

Setup items	Key name	Parameters	Description
Cut & Feed	F1	Cut	Cut media
	F2	Dist.Adj.	Set step
	F3	Forward	Feeds media forward.
	F4	Backward	Feeds media backward.

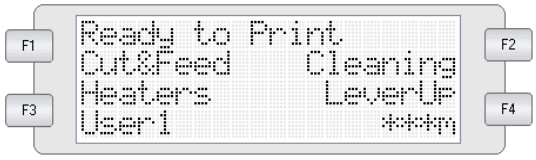
⚠ Notes ⚠

If "Take-Up Roll" is set in the media detection setup menu, the product will not operate even if the [F4] key has been pressed.

6.3 [F2] - CLEANING THE HEADS

When there are some missing nozzles, a cleaning should be done. Depending on the quantity of missing nozzles and which head, a little, normal or powerful cleaning on head 1-2, head 3-4 or ALL could be done.

Step 1 : Verify the following regarding the condition of the printer.
It is not currently printing



Step 2 : Press the [F2] key of the operation panel.
To shift to the cleaning menu.

Step 3 : Press the [F1] key or the [F2] key on the operation panel.
The product will perform following operations:

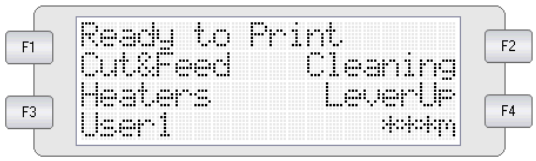
Setup items	Key name	Parameters	Description
Cut & Feed	F1	ALL, Head 1 – Head 2	Clean ALL heads or head couple one or two
	F2	Little, normal, powerful	Set the intensity of a cleaning

Step 4 : Press the [ENTER] key to start the requested cleaning.

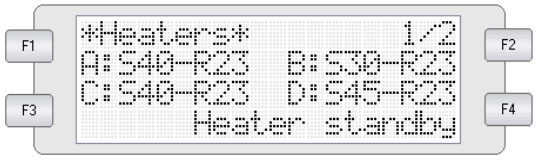
6.3.1 [F3] - Controlling the heater elements

If you want to change or check the heater elements, follow the steps below.

Step 1 : Verify the following regarding the condition of the printer.
It is not currently printing



Step 2 : Press the [F3] key of the operation panel.
To shift to the heater menu.

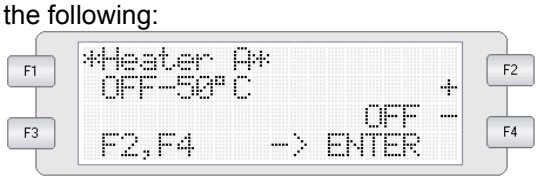


The 'heater message' can be one of the following:
Heater standby
Heater warming up
Heater ready

'A' stands for the heater.
'B' stands for the fixer.
'C' stands for the post fixer.
'D' stands for the dryer.
'S' stands for the Set-temperature (requested temperature).
'R' stands for the Real-temperature (actual temperature).

6.3.1.1 Change the heater temperature

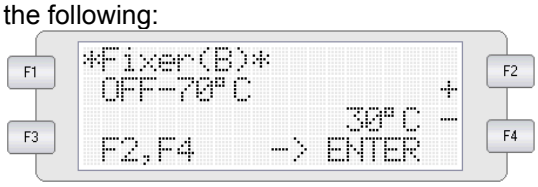
To change the temperature of the heater, press the [F1] key on the operation panel. The display will mention the following:



Press the [F2] key to decrease the temperature.
Press the [F4] key to increase the temperature.
Press the [ENTER] key to confirm the requested temperature change.
Press the [CANCEL] key to leave the menu without changing the heater settings.

6.3.1.2 Change the fixer temperature

To change the temperature of the fixer, press the [F2] key on the operation panel. The display will mention the following:



Press the [F2] key to decrease the temperature.
Press the [F4] key to increase the temperature.
Press the [ENTER] key to confirm the requested temperature change.
Press the [CANCEL] key to leave the menu without changing the heater settings.

6.3.1.3 Change the post fixer temperature

To change the temperature of the post fixer, press the [F3] key on the operation panel. The display will mention the following:

Press the [F2] key to decrease the temperature.
Press the [F4] key to increase the temperature.
Press the [ENTER] key to confirm the requested temperature change.
Press the [CANCEL] key to leave the menu without changing the heater settings.

6.3.1.4 Change the dryer temperature

To change the temperature of the dryers, press the [F4] key on the operation panel. The display will mention the following:

Press the [F2] key to decrease the temperature.
Press the [F4] key to increase the temperature.
Press the [ENTER] key to confirm the requested temperature change.
Press the [CANCEL] key to leave the menu without changing the rear heater settings.

6.3.1.5 Activate/ deactivate heaters.

In the second menu, press the [F1] key to activate or deactivate all heating elements.

In case the heating elements are activated, the display will mention "SET OFF". By pressing the [F4] key you can deactivate the heating elements. The display will mention "SET ON".

In case the heating elements are deactivated, the display will mention "SET ON". By pressing the [F4] key you can activate the heating elements. The display will mention "SET OFF".

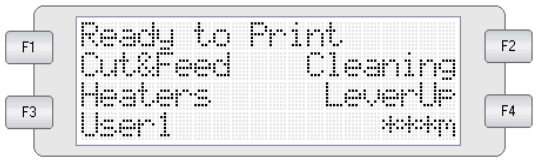
Please note that after finishing a printing job (and no other print job is sent to the printer the heating elements will keep their temperature for approximately 6 minutes. After 6 minutes the heating elements are powered OFF.

6.3.2 [F4] - Operating the pressure rollers

When you want to switch the up and down movement of the pressure rollers follow the steps below.

Step 1 : Press the [F4] key on the operation panel.

The printer works as follows.



Status of the printer	Operation after the [F4] key has been pressed
The pressure rollers have been lowered The MEDIA SET lamp switches OFF.	The pressure rollers are lifted The MEDIA SET lamp will turn on (orange).
The pressure rollers have been raised. The MEDIA SET lamp switches ON (orange).	The pressure rollers are lowered. The MEDIA SET lamp will turn off.

⚠ Notes ⚠

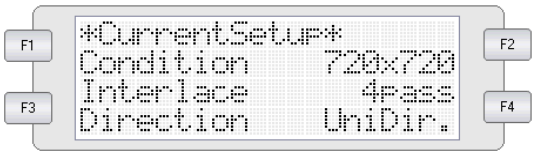
You can also switch the up and down movement of the pressure rollers using the foot switch instead of the operation panel.

6.3.3 [ENTER] - Print mode check

Use the following procedure to check the print mode currently set.

Step 1 : Press the [ENTER] key on the operation panel.
The following information is displayed on the operation panel for three seconds.

Line 2
Line 3
Line 4



N°	Position	Description	Reference
1	Line 2	The printing quality is displayed.	Refer to 'Printing quality menu'
2	Line 3	The interlace method is displayed.	Refer to 'InterLace Setup menu'
3	Line 4	The printing direction is displayed.	Refer to 'Printing direction menu'

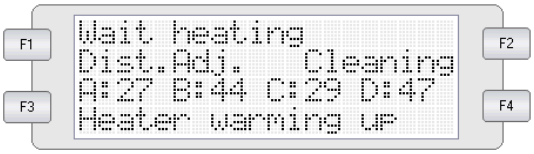
Step 2 : When the printing mode display closes, the product changes to its main screen.

6.4 OPERATION PANEL DURING PRINTING

When sending a file to your printer, following messages can be displayed.

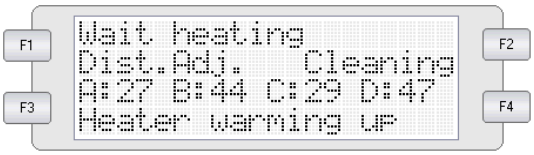
6.4.1 When heaters are not ready

When the heaters are not reached their target temperature, the following screen will be displayed.

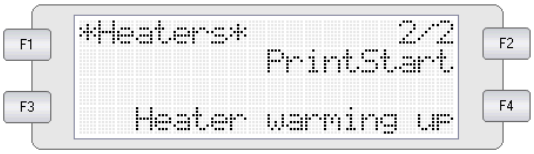


Still, it is possible to start the print. However, the heater will continue to warm up in order to reach the requested temperature.

Step 1 : Press the F3 key to ENTER the HeaterStatus menu.



Step 2 : Go to submenu 2/2 and press the F2 key to start the print.

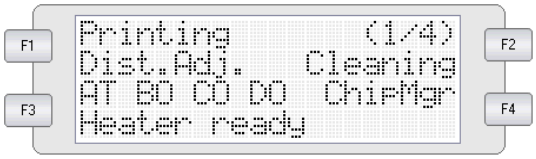


6.4.2 When heaters are ready

When heaters are ready, the printer will start printing.
While printing, some actions can be taken.

6.4.2.1 [F1] - On the fly step adjustments.

In case of overlapped printing images or white lines on printing image, the step should be adjusted.



(+) Increase in case of overlap.

(-) Decrease in case of white lines between swaths.

⚠ Notes ⚠

For more details about step adjustment, please refer to "Media Feed Compensation"

6.4.2.2 [F2] - Cleaning

While printing, it could be possible that some nozzles drop out, in that case, perform a little, normal or powerful cleaning.

Please follow the steps below to perform a cleaning.

When there are some missing nozzles, a cleaning should be done. Depending on the quantity of missing nozzles and which head, a little, normal or powerful cleaning on head 1-2, head 3-4 or ALL could be done.

Step 1 : Press the [F2] key of the operation panel to shift to the cleaning menu.

Step 2 : Press the [F1] key or the [F2] key on the operation panel.
The product will perform following operations:

Setup items	Key name	Parameters	Description
Cut & Feed	F1	ALL, Pump 1 – Pump 2	Clean ALL heads or head couple one (pump 1) or two (pump 2)
	F2	Little, normal, powerful	Set the intensity of a cleaning

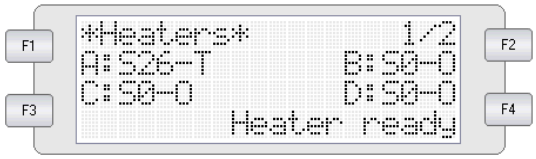
Step 3 : Press the [ENTER] key to start the requested cleaning.

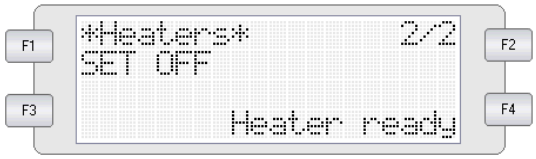
6.4.2.3 [F3] - Adjust heaters

While printing, the heater values can be changed. For example: when noticing cockling.
Please follow the steps below to adjust the heater temperatures.

Step 1 : Press the [F3] key

Step 2 : Following screen will be displayed





Step 3 : Change the value of one or more heaters or switch them all off.

⚠ Notes ⚠

For more details about heater adjustment, please refer to "Controlling the heater elements on the Spitfire Extreme printer"

6.4.2.4 *[F4] - Loading ink volume during printing*

It is possible to load ink volume to the printer during printing.

There are two possible scenarios:

SmartChip management system is not empty yet and the printer keeps printing.

Press the F4 key to load ink volume.

SmartChip management system is empty and the printer stops printing but does NOT cancel the print.

The following message will appear

Press the F4 key to load ink volume.

⚠ Notes ⚠

Please refer to chapter 4.10 to load ink volume properly.
Please note that the heaters will switch off after 15 minutes. After that point you will have to reconfigure the heaters manually before resuming the print job. This is the same behaviour as when a cassette gets empty.

6.4.2.5 Menu ▼ and ▲

During printing, extra information about the current job is available. Use the menu UP and DOWN keys to browse through these menus.

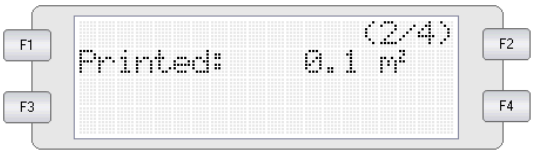
1) Menu 1/4

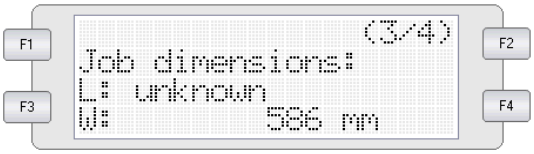
Standard menu during printing. It is only possible to cancel a print in this menu!

2) Menu 2/4 and 3/4

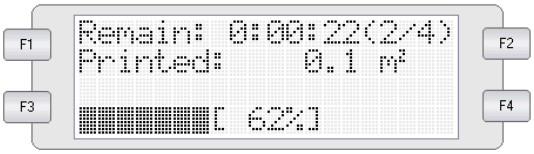
Two situations are possible:

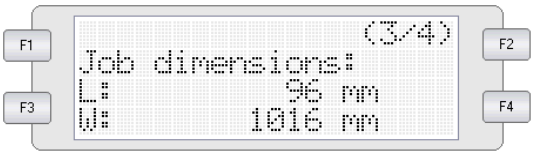
Length information is not provided with the job. The printer cannot know progress and remaining time. However, size of the already printed area is shown.





Length information is provided; the printer calculates progress and remaining time. The correctness of this depends on the correctness of the provided information.





4) Menu 4/4

This menu displays the important print parameters provided by the RIP software.

6.5 OPERATION PANEL AFTER PRINTING

The operations performed after printing, are described here.

6.5.1 Cut off media with the printer knife

The media cutting procedure is described below.
Roll media is automatically cut after printing when "Auto" is set on the cut media menu and roll media has been set.
When the operation panel is in the main screen, and the product is in the following conditions, the media can be cut on the desired position:

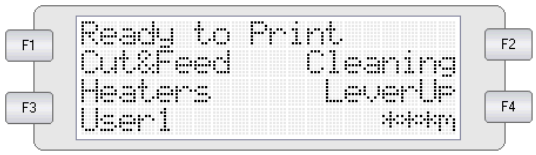
When roll media has been set:
If "OFF" is set on the cut media menu
If "Take Up Roll" has been set in the media detection setup menu
When sheet media has been set

Follow the steps below to cut the media.

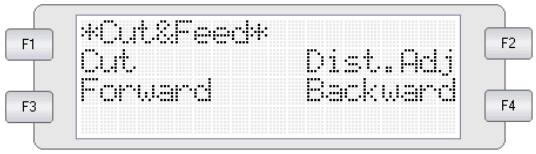
Follow the steps below to cut the media.

Step 1 : Make sure that the MEDIA SET lamp on the operation panel is OFF.

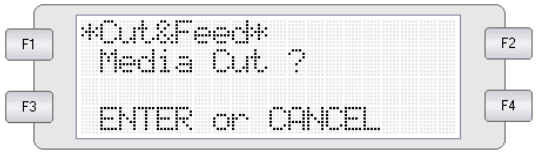
Step 2 : Press the [F1] key on the operation panel to shift to the cut and feed menu.



Step 3 : Feed media to the desired position using the [F3] and [F4] key.



Step 4 : Press the [F1] key to cut the media.



Press the [ENTER]-key to cut the media or the [CANCEL]-key to abort this operation.

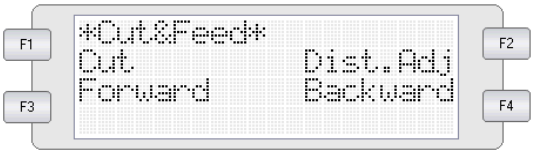
⚠ Notes ⚠

If the front edge of the roll media is not straight when you load new roll media, you should cut its edge.
Cutting blades are consumable. Replace them at regular intervals following "Replacing the cutting blade".

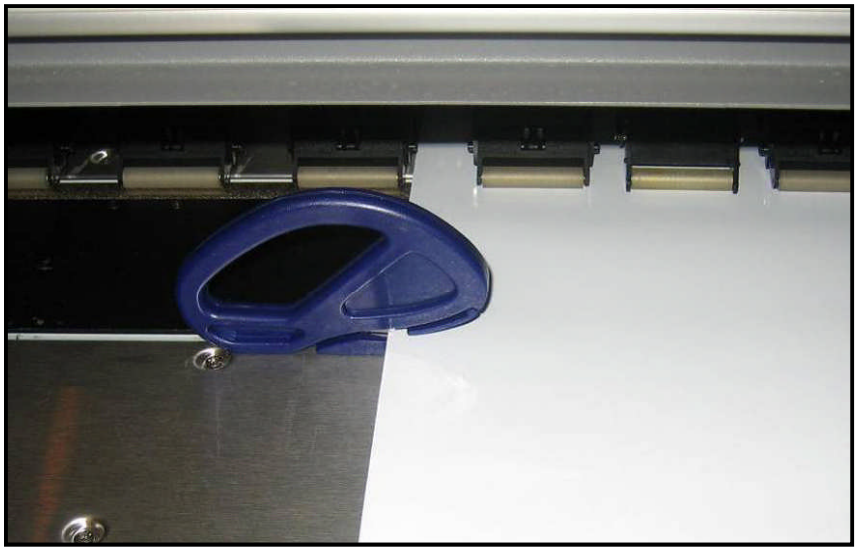
6.5.2 Manually cut off media

This section explains how to cut the media manually.
When "Manual" is set in the media cut menu, the media can be cut manually.
Cut the media according to the following procedure.

Step 1 : Feed media to the desired position using the [F3] and [F4] key.

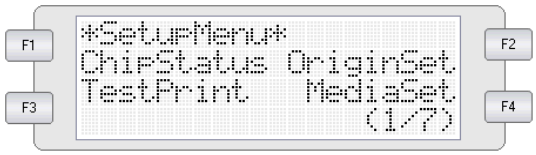


Step 2 : Cut the roll media following the cutting groove.



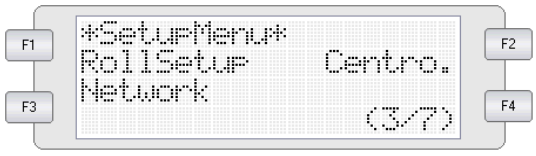
6.6 MENU OVERVIEW (1/7 – 7/7)

This section explains which kind of settings can be made via the printer interface. Find below an overview of all Setup Menus.

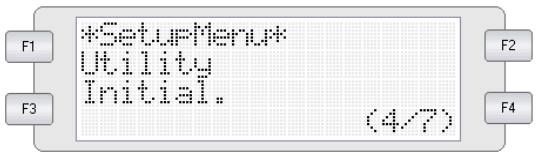


F1	Ink/ChipStatus	Check the ink left in each cassette / smart chip management system
F2	OriginSet	Set the printing start position
F3	TestPrint	Make several test prints
F4	MediaSet	Set media details

F1	PrintMode	Set Print Mode details
F2	Command	
F3	Layout	Make layout settings
F4	Function	Make function settings



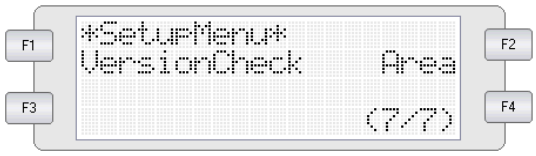
F1	RollSetup	Set roll details
F2	Centro.	Set centronics communication mode
F3	Network	Set network details



F1	Utility	Make advanced utility settings
F3	Initial	Return parameters to factory default

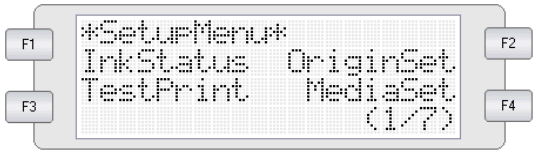
F1	DataDump	For Authorized Mutoh technicians only
F2	InkManager	Set ink details

F1	H. Unlock	Unlock the head
F2	WiperClean	Unlock the head to clean the wipers
F3	TankChg.	Replace tank procedure
F4	TubingFlush	Flush the tubings



F1	VersionCheck	Check which firmware version is installed
F2	Area	Check printed area in m²

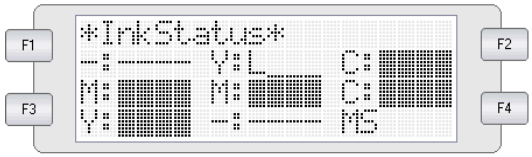
6.6.1 Setup Menu 1/7



6.6.1.1 Ink status menu

Depending on the mode the printer is in (cassette or printer mode), this menu will be displayed as InkStatus or ChipStatus.

The InkStatus menu gives all information regarding the 8 ink cassettes in the slots.

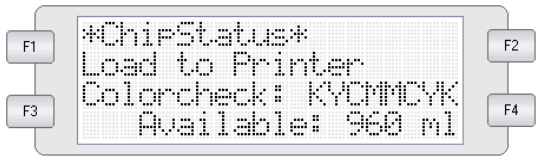


Setup items	Parameters	Description
InkStatus	Ink status for the ink cassette slots 1 – 8.	Display Line 2: ink cassette slots 1 – 3 Line 3: ink cassette slots 4 – 6 Line 4: ink cassette slots 7 – 8
		Symbols : (Parameter 1 : Parameter 2) Ink Colour : K = Black, C = Cyan, M = Magenta, Y = Yellow W = Cleaning Liquid Ink Remaining: 100%-80% 80%-60% 60%-40% 40%-20% 20%-0% Wrong ink kind Cassette not present Wrong ink colour Chip not present on cassette
		Mode : Indicated in the lower right corner MS (Mild Solvent) MS+ (Mild Solvent Plus)
	-	[CANCEL] key: shifts to the previous menu.

⚠ Notes ⚠

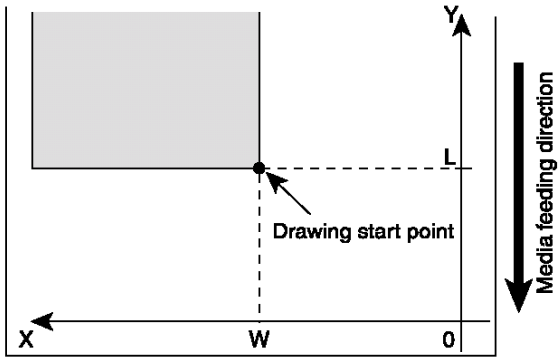
To display the Ink Status menu, be sure to use the recommended ink cassettes. If any other ink cassettes are used, the ink status will not be correctly displayed.

In the ChipStatus menu it is possible to load ink volume to the SmartChip management system or to ink volume which is left. Please refer to the chapter "Working with Mutoh's SmartChip management system".



6.6.1.2 *Origin setup menu*

Set the printing start position (origin) for printing data.
Set this when you want to re-print to blank area of the printed media by changing the layout of the printing data.

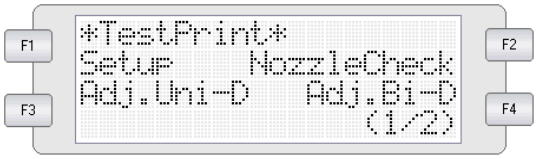
Setup items	Parameters	Description
Origin setting	• L: Media feed value • W: Print head movement value (Unit: mm)	Changes the print head position and media feed amount by operating the following keys. • [F1] key: Feeds media forward. • [F2] key: Moves the print head to the left. • [F3] key: Feeds media backward. • [F4] key: Moves the print head to the right. • [ENTER] key: Determines the setup values then returns to the previous hierarchical menu. 
	-	[CANCEL] key: shifts to the previous hierarchy menu. Refer to 'Setup menu'

⚠ Notes ⚠

When printing data from the hard disk, the printing will start from the same start position as when the printing data was written, regardless of the home position setting value.

6.6.1.3 Test print menu

Make test prints.



Setup items	Parameters	Description
Test print (1/2)	SetupPrint	Performs setup printing.
	NozzleCheck	Performs nozzle check printing.
	Alignment (UniDir)	Performs accuracy adjustment printing in one direction.
	Alignment (BiDir)	Performs accuracy adjustment printing in two directions.
Test print (2/2)	Palette printing	Performs palette printing.
	Maintenance status	Maintenance status printing is performed.
	Distance Adj. Check	Print distance adjustment check pattern
Test print (1/2-2/2)	-	[CANCEL] key: shift to the previous hierarchy menu.

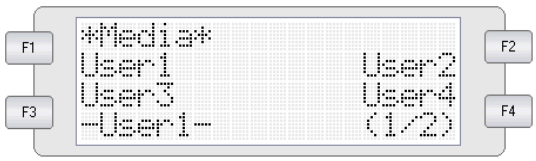
6.6.1.4 Media setup menu

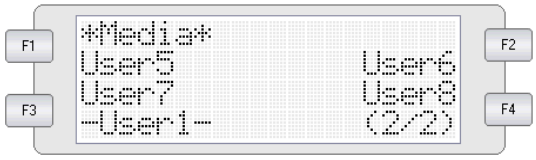
Perform various settings for media.

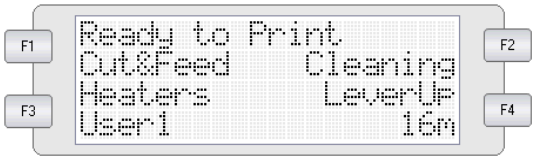
Setup items	Parameters	Description
Media setting	Type	Sets the media type used for test printing.
	Cut size	To set the method for detecting the size of the media when sheet media has been loaded.
	Top feed	Sets the amount of media to be fed when printing begins. Make this setting when using roll media.
	Media cutting	The method of cutting the media after printing is set here.
	-	[CANCEL] key: to shift to the previous hierarchy menu.

6.6.1.5 Media type menu

Set media type for printing.





Setup items	Parameters	Description
Types (1/2)	User media 1	To set the type of media used for printing. For setup values of printing operation, eight settings of "user media 1-8" can be set. 
	User media 2	
	User media 3	
	User media 4	
Types (2/2)	User media 5	
	User media 6	
	User media 7	
	User media 8	
Type (1/2-2/2)	-	[CANCEL] key: to shift to the previous hierarchy menu.

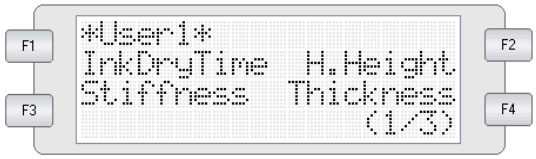
6.6.1.6 User media menu

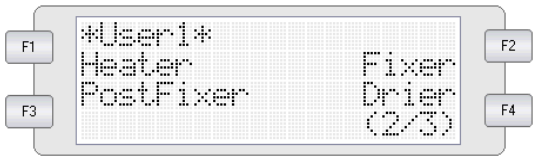
Make various settings on user defined media.
In the User media menu, for each setup value of following printing operation, eight settings of "user media 1-8" can be set.

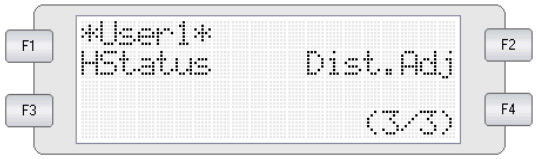
⚠ Notes ⚠

When media other than the recommended media are used (user media), the following problems may occur:
- Media detection error
- Oblique, torn, and creased media
- Media jams
- Decrease in print quality due to blurring, missing, or smudging of ink
- End detection error of roll media

Problems caused by using media other than the recommended will void the warranty.
For more information, contact your local MUTOH dealer.







Setup items	Parameters	Description
User media 1-8 (1/3)	InkDryTime	In order to let the ink for the printing dry, the time between the end of the print and the beginning of the next print is set.
	HeadHeight	Sets the distance (head height) between the print head and the media.
	Stiffness	Makes the setting on the stiffness of the media to be used.
	Thickness	Makes the setting on the thickness of the media to be used.
User media 1-8 (2/3)	Heater	Sets the temperature of the Heater.
	Drier	Sets the temperature of the Drier.
	Fixer	Sets the temperature of the Fixer.
	PostFixer	Sets the temperature of the Post Fixer.
User media 1-8 (3/3)	HStatus	Checks the temperature of heating elements.
	Dist.Adj	Performs various settings for media feed compensation.
Type (1/3-3/3)	-	[CANCEL] key: to shift to the previous hierarchy menu.

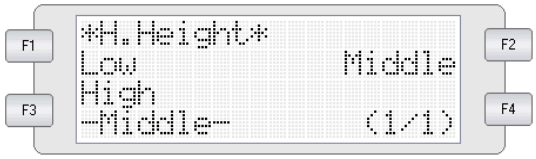
6.6.1.7 Ink dry time menu

Set the waiting period between the end of operation and the start of next printing in order to let the printed media dry.

Setup items	Parameters	Description
InkDryTime	0 to <30 sec. > to 270 sec. to 60 min.	To change the InkDryTime by operating the following keys. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

6.6.1.8 Head Height menu

Set the distance (head height) between the print head and the media.
Head height can be changed to three levels according to media thickness.



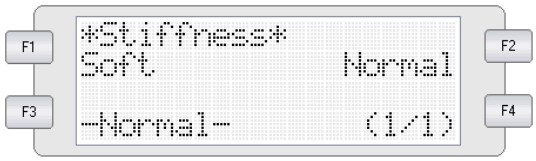
Setup items	Parameters	Description
HeadHeight	Low	When using media with a thickness of 80µm to 300µm
	[Middle]	When using media with a thickness of 300µm to 700µm
	High	When using media with a thickness of 700µm to 1000µm
	-	(1 µm = 0,001 mm)

⚠ Notes ⚠

Set the height of the head in relation to the thickness of the media.
If the setting is set to "High" and the print is created on thin media, good quality print results will not be achieved.
If the setting is set to "Low" and thick media is used, the media and print head will come into contact and may result in damage to the product.

6.6.1.9 Stiffness menu

Set the media sticking force (media stiffness) to the media guide.



Setup items	Parameters	Description
Stiff	<Normal>	Setting for normal media
	Soft	Setting for soft media where media feeding errors and media jams occur
	-	After setting, shift to the previous hierarchy menu.

6.6.1.10 Thickness menu

Set the media thickness.

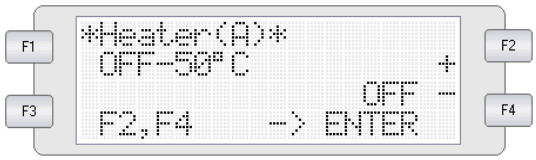
Setup items	Parameters	Description
Thickness	50µm-<100µm>1500µm	Change media thickness by operating the following keys. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

⚠ Notes ⚠

Bidirectional quality can only be obtained when media thickness is set correctly

6.6.1.11 Heater menu

Set the temperature of the Heater.



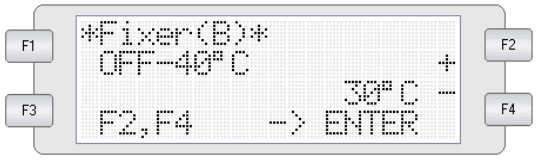
Setup items	Parameters	Description
Heater	OFF – 50°C	Change heater temperature by operating the following keys. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

⚠ Notes ⚠

The default setting for the heater is set to '50°C'.
The function of the heater (A): Warming the transfer paper before entering the pressure rollers.
The pre-expansion helps to minimize media cockling.

6.6.1.12 Fixer menu

Set the temperature of the Fixer.



Setup items	Parameters	Description
Fixer	OFF – 40°C	Change fixer temperature by operating the following keys. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

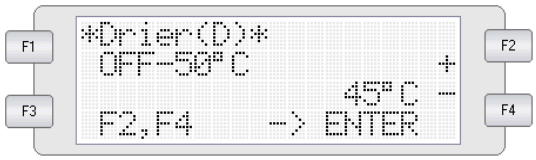
6.6.1.13 Post Fixer menu

Set the temperature of the Post Fixer.

Setup items	Parameters	Description
Post Fixer	OFF – 50°C	Change post fixer temperature by operating the following keys. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

6.6.1.14 Drier menu

Set the temperature of the Drier.



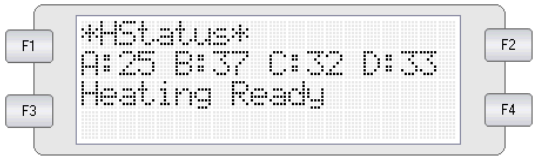
Setup items	Parameters	Description
Drier	OFF – 50°C	Change drier temperature by operating the following keys. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

⚠ Notes ⚠

The default setting for the drier is set to '50°C'.
The function of the drier (D): Heating the printed transfer paper evaporates the water fast enough so that the print is touch-dry when wound.

6.6.1.15 HStatus menu

Check the temperature of the heating elements.



⚠ Notes ⚠

A stands for the Heater.
B stands for the Fixer.
C stands for the Post Fixer.
D stands for the Dryer.

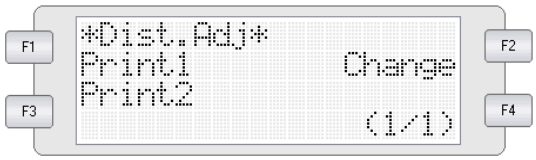
Press the [CANCEL] key to go to the previous menu.

6.6.1.16 Distance adjustment menu

To perform various settings for media feed compensation

⚠ Notes ⚠

For details of the distance adjustment, refer to "Distance adjustment".



Setup items	Parameters	Description
Dist.Adj	Print1	Performs printing by media feed compensation. A correction pattern with a width of ± 0.20% (in steps of 0.10 %) is printed around the centre of the correction value currently set.
	Change	Changes the media feed compensation value. The menu changes to the Change Media Feed Correction Value menu.
	Print2	Performs printing by media feed compensation (for fine adjustment). A correction pattern with a width of ± 0.02% (in steps of 0.01%) is printed around the centre of the correction value currently set.
	-	[CANCEL] key: Shifts to the previous hierarchy menu.

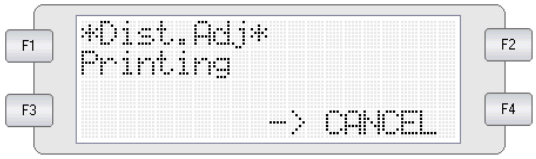
6.6.1.17 Change menu

Change the distance adjustment value.

Setup items	Parameters	Description
Change	90.00%-<100.00%>-110.00%	Changes the media feed compensation value by operating the following keys. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

6.6.1.18 Distance adjustment menu

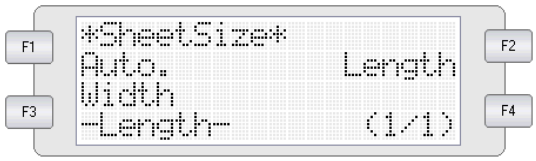
Performs printing by distance adjustment.

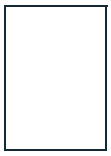


Setup items	Parameters	Description
Dist.Adj	Data printing	Now printing by media feed compensation. Wait for a while until printing has been finished.
	-	• [CANCEL] key: to perform following operations : • Media feed correction printing has been finished. • To eject media. • To shift to the previous hierarchy menu.

6.6.1.19 Sheet size menu

When loading a sheet of media, set the method for detecting the size of the media.



Setup items	Parameters	Description
SheetSize	Auto	Media measurement sequence ► REAR – RIGHT – LEFT – TOP
	Length	Media measurement sequence ► RIGHT – LEFT – TOP Media orientation when loading standard size media. 
	Width	Media measurement sequence ► RIGHT – LEFT – TOP Media orientation when loading standard size media.
	-	After setting, shift to the previous hierarchy menu.

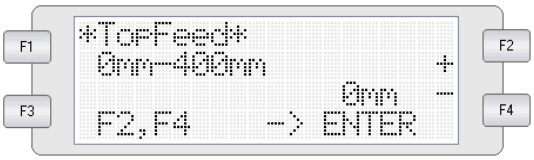
⚠ Notes ⚠

When using sheet media other than recommended media, set to "blank form vertical" or "blank form horizontal".
The following size of sheet media can be set.

- ISO series (A0, A1, A2, A3, A4)
- JIS series (B1, B2, B3, B4)
- ARCH series (A, B, C, D)

6.6.1.20 Top feed menu

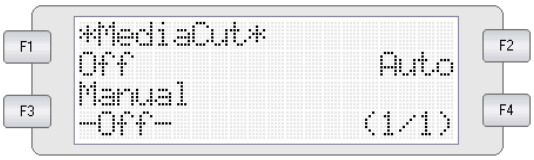
Set the amount of media to be fed when printing begins. Make this setting when using roll media.



Setup items	Parameters	Description
Top feed	<0mm>-400mm	To feed media at the start of printing. Set when printing on roll media. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

6.6.1.21 Media cut menu

Set media cut method after printing.



Setup items	Parameters	Description
Media cutting	Auto	After printing has been completed, the media is sent to the media cut position and is automatically cut.
	Manual	Feed media to the media cut position after printing. Use regular cutting blades available from hardware stores.
	Off	No media feed after printing.
	-	When "Auto" is selected, proceed to the Shortest Cut Length menu. • If "Manual" or "Off" has been selected, the screen changes to the menu of the previous hierarchy.

⚠ Notes ⚠

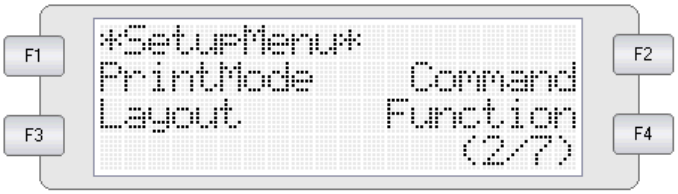
For the situations shown below, the media cut settings are always changed to "Off" regardless the previous settings.

- When "Take-up system" or "Roll-up/roll off system" is set for the media detection settings (Media detection menu)

When using the media shown below, set the media cut setting to "Manual". If set to "Auto", the following errors may occur :

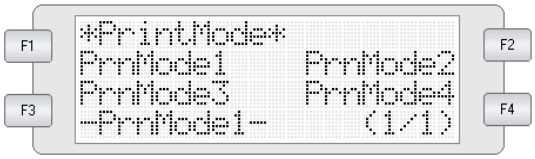
- Cloth material: The cloth fibre is not completely cut.
- Media with glue: Glue will adhere to the cutting blade and decrease cutting performance.

6.6.2 Setup Menu 2/7



6.6.2.1 Print mode menu

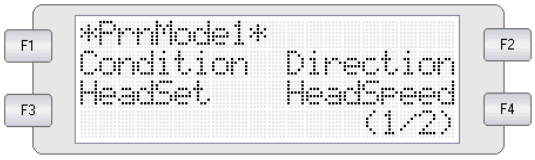
Perform various settings for Print mode. For each setup value of Print mode, four settings of "Printing mode 1" - "Printing mode 4" can be set.

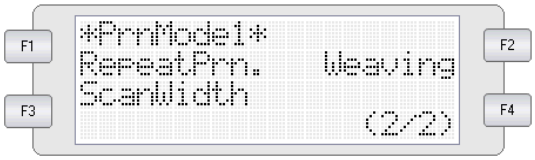


▼

Select dedicated PrintMode

▼

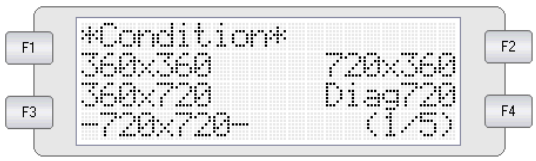


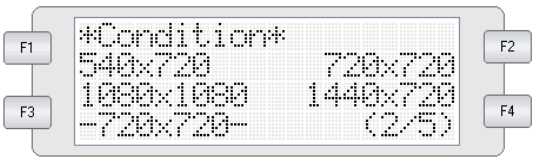


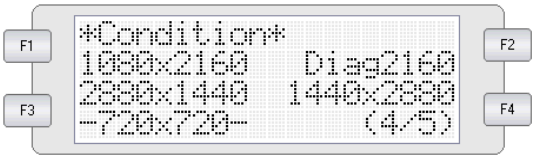
Setup items	Parameters	Description
Printing mode 1-4 (1/2)	Condition	To set printing quality.
	Direction	To set print head moving direction for printing.
	HeadSet	To set which heads are used for printing.
	RepeatPrn.	To set the head speed.
Printing mode 1-4 (2/2)	HeadSpeed	To make settings for the repeat print.
	Weaving	To set which weaving pattern should be used for printing
	ScanWidth	To specify the carriage movement
Printing mode 1-4	-	[CANCEL] key: To shift to the previous hierarchy menu.

6.6.2.2 *Condition menu*

Select printing quality with consideration to applications of printing data and printing speed.



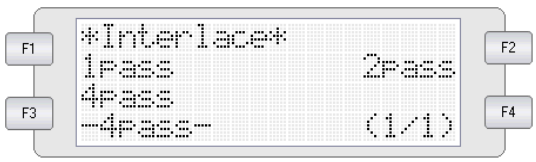




Setup items	Parameters	Description
Condition (1/5)	360 × 360 dpi	The display changes to interlace setup items after the print quality items settings have been finished.
	720 × 360 dpi	
	360 × 720 dpi	
	Diagonal 720 dpi	
Condition (2/5)	540 x 720 dpi	
	720 × 720 dpi	
	1080 × 1080 dpi	
	1440 × 720 dpi	
Condition (3/5)	720 × 1440 dpi	
	Diagonal 1440 dpi	
	1440 × 1440 dpi	
	2160 × 1080 dpi	
Condition (4/5)	1080 × 2160 dpi	
	Diagonal 2160 dpi	
	2880 × 1440 dpi	
	1440 × 2880 dpi	
Condition (5/5)	Diagonal 2880 dpi	
Condition (1/5 – 5/5)	-	[CANCEL] key: To shift to the previous hierarchy menu.

6.6.2.3 *InterLace Setup menu*

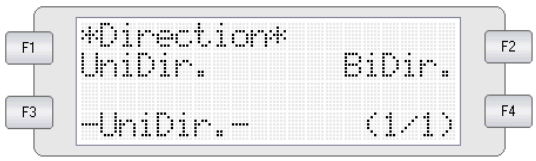
To set the over printing method (interlace method) for printing.



Setup items	Parameters	Description
Interlace method	1 pass	Over printing is not performed.
	1 pass Few	Only gaps between lines are overwritten.
	2 pass	Over-printing is performed twice per 1 line.
	4 pass	Over-printing is performed four times per 1 line.
	-	[CANCEL] key: To shift to the previous hierarchy menu.

6.6.2.4 *Printing direction menu*

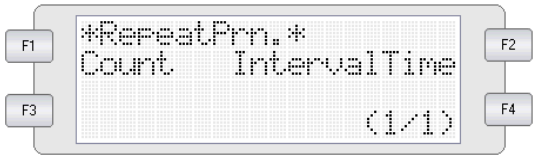
Set print head moving direction for printing.



Setup items	Parameters	Description
Direction	UniDir	Prints in one direction.
	BiDir	Prints bi-directionally.
	-	[CANCEL] key: To shift to the previous hierarchy menu.

6.6.2.5 *Repeat printing menu*

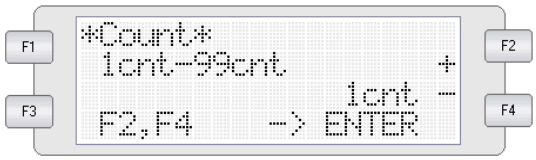
Make settings for the repeat print.



Setup items	Parameters	Description
Repeat	Times	To set the number of repeats per line of printing.
	Interval	To set interval time for the repeat print.
	-	[CANCEL] key: To shift to the previous hierarchy menu.

6.6.2.6 *Repeat times menu*

Set the number of repeats per line of printing.



Setup items	Parameters	Description
Times	<Once> to 99 times	To change repeat times by operating the following keys: • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

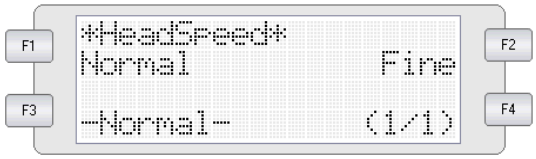
6.6.2.7 *Interval time menu*

Set interval time for the repeat print.

Setup items	Parameters	Description
Interval	<0.0 sec.> to 0.1 to 5.0 sec.	To change interval time by operating the following keys. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

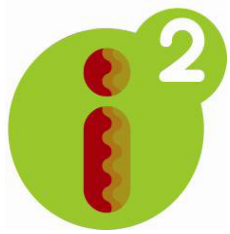
6.6.2.8 *Head speed menu*

Only applicable when printing in 360dpi.



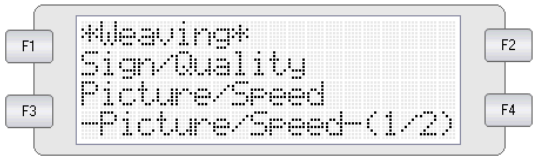
Setup items	Parameters	Description
HeadSpeed	Normal	Print at normal speed of 360 dpi
	Fine	Print at the speed of 720 dpi (slower – more drying time)
	-	[CANCEL] key: To shift to the previous hierarchy menu.

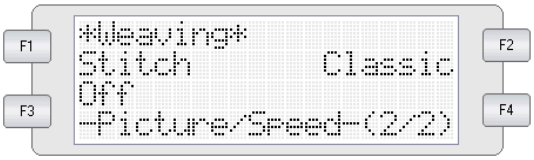
6.6.2.9 *Weaving menu – i²*



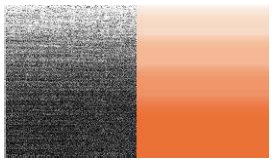
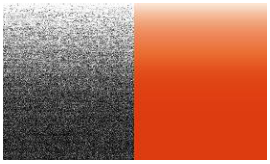
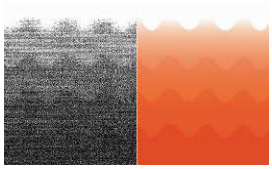
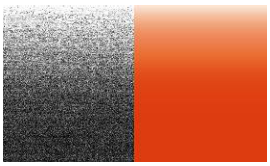
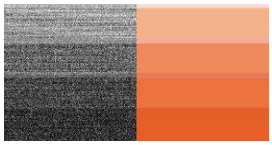
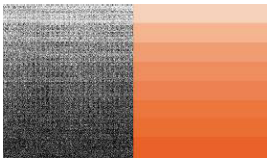
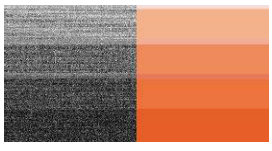
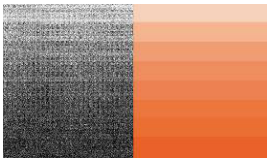
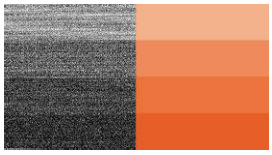
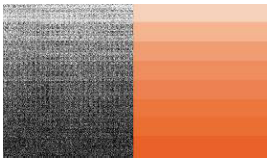
Without weaving ON, an image is completed (formed) by printing a series of complementary rectangular shaped stripes (bands, swaths, passes). Inherent to classic inkjet printing is that ink drying effects, stepping mismatch, miss firing nozzles show up in the printed image via ink bleeding and various types of banding. By switching ON one of the weave patterns you will give the traditional rectangular print swaths a wave-shaped look that will save you time and boost your output quality. Difficult images will print smoother, banding will be suppressed (neutralized) and you will have to spend less time fine-tuning your printer to create great looking output.

Moreover, when using wave-tuned profiles, you will be able to boost your printer's colour gamut as the i² (intelligent interweaving) technology allows depositing more ink, helping you to achieve higher colour densities.



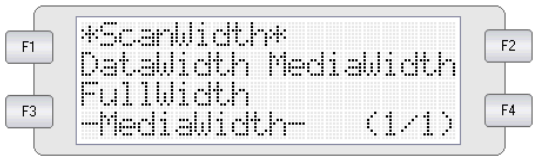


Setup items	Parameters	Description
Weaving (1/2)	Sign / Quality	Please refer to the table below to know what the different weaving forms are and which one to use.
	Picture / Speed	
Weaving (2/2)	Stitch	
	Classic	
	Off	
Weaving (1/2 – 2/2)	-	[CANCEL] key: To shift to the previous hierarchy menu.

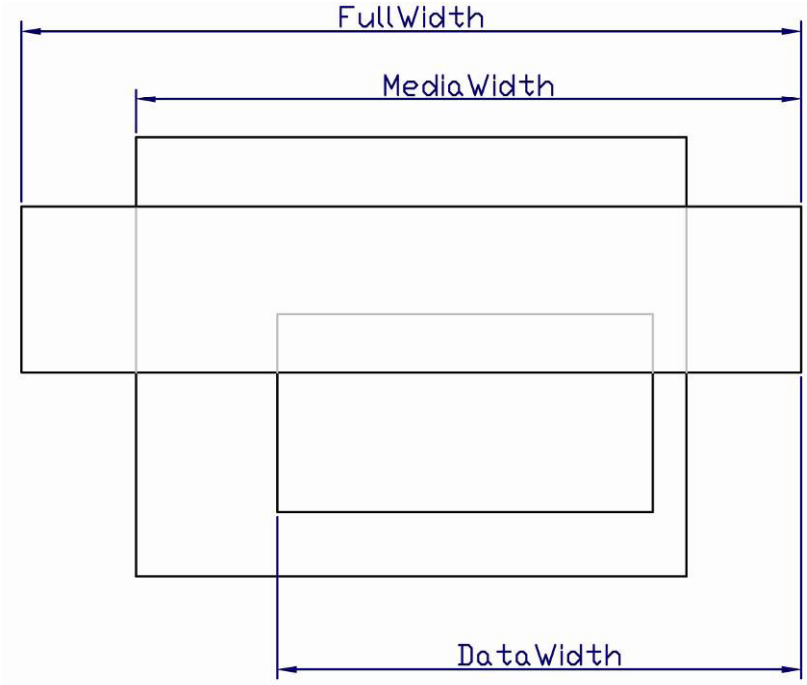
Weaving method	User Tip	Print Modes Supported	2 pass	4 pass
Sign / Quality	Preferred setting for signage/poster applications containing big areas with solid colours or critical gradients and for photo quality output on coated media. (small loss of speed in 2 pass modes)	720x720: 2 pass, 4 pass 540x720: 2 pass, 4 pass Default selection after firmware installation		
Picture / Speed	Preferred setting for non-sign images, pictures, continuous tone data. (no speed loss)	720x720: 2 pass, 4 pass 540x720: 2 pass, 4 pass (*) 4-pass is a quality mode and will always use a tuned sign weave pattern, even if picture is selected from the panel / RIP.		
Stitch	Creates a fine print swath overlap. Mildly improves print quality versus "Off" setting. (lowest level of interweaving)	720x720: 2 pass, 4 pass 540x720: 2 pass, 4 pass (*) 4 pass data will be printed as classic		
Classic	Use classic to maintain classic printer behaviour in all print modes. (prior to firmware version 3.01)	All print modes		
Off	Switches off any kind of overlap/weaving. Useful when trying to inspect individual nozzle behaviour or checking the step-adjust.	All print modes		

6.6.2.10 *ScanWidth menu*

It is possible to specify the carriage movement along the media – printed area. This will have a direct effect on the drying time!! Please find more details below.



Setup items	Parameters	Description	Drying time
ScanWidth	DataWidth	Carriage moves only over the printing area	Short
	MediaWidth	Carriage moves over the media	Depending on MediaWidth
	FullWidth	Carriage moves over the full width	Long



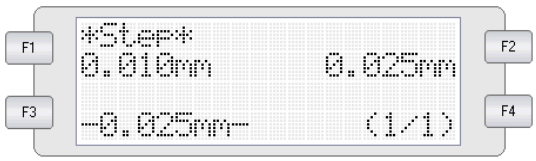
6.6.2.11 *Command setup menu*

Perform various settings for printer commands.

Setup items	Parameters	Description
Command setup (1/2)	Step	To set the units for amount of movement for printing.
	Resolution	Makes settings for image resolution while printing with image data.
	OnlineTimer	Makes settings for the time between the end of receiving printing data from a computer and recognizing the end of printing data.
	-	[CANCEL] key: to shift to the previous hierarchy menu.

6.6.2.12 *Print step menu*

Set the units for amount of movement for printing.



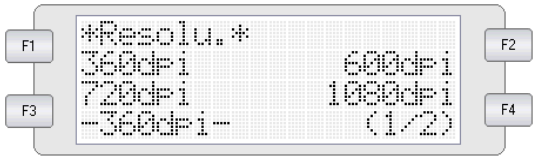
Setup items	Parameters	Description
Print step	<0.010mm>	To set the printing units to 0.010mm.
	<0.025mm>	To set the printing units to 0.025mm.
	-	To shift to the previous hierarchy menu.

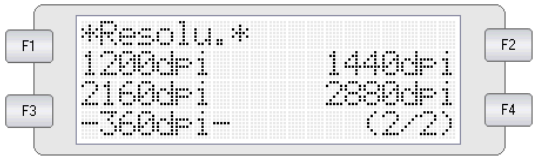
⚠ Notes ⚠

Please note that some software packages use the "step per mm" terminology, in which case a program step of 0.025 mm corresponds with 40 steps per mm and a program step of 0.010 mm with 100 steps per mm.

6.6.2.13 *Image resolution menu*

Set resolution for image data for printing.





Setup items	Parameters	Description
Image resolution (1/2)	<360dpi>	Makes settings for image resolution while printing with image data.
	600dpi	
	720dpi	
	1080dpi	
Image resolution (2/2)	1200dpi	
	1440dpi	
	2160dpi	
	2880dpi	
Image resolution (1/2-2/2)	-	To shift to the previous hierarchy menu.

6.6.2.14 *Online time out menu*

When sending data to the printer, it might be possible that the data transfer is interrupted. The printer will wait, depending on the set online timer, to consider the data transfer as finished. The printer will print the received data. It is recommended to disable (OFF) this feature. The printer will wait until the rest of the data is received.

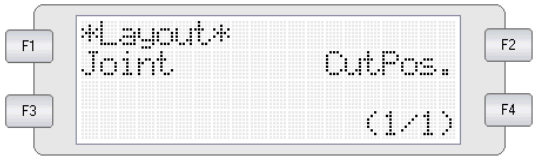
Setup items	Parameters	Description
OnlineTimer	OFF/2sec - 800sec.	To change the Online time out time by operating the following keys. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

6.6.2.15 *Layout setup menu*

Make various settings on layout function.

⚠ Notes ⚠

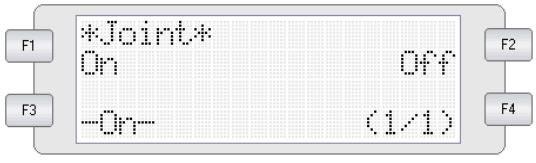
The layout function automatically determines the size of printing data sent from the computer, and then determines the amount of roll media required without wasting media.
If sheet media has been loaded, the layout function is disabled.



Setup items	Parameters	Description
Layout	Joint	Makes settings for stitching print.
	CutPos.	To set the media cutting position after printing has been completed.
	-	[CANCEL] key: To shift to the previous hierarchy menu.

6.6.2.16 *Joint printing menu*

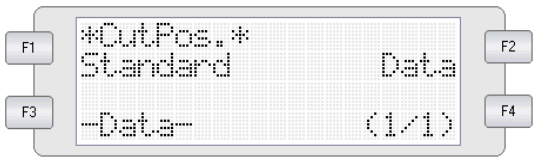
Set joint printing.



Setup items	Parameters	Description
Joint	<Off>	Does not perform stitching print.
	On	Performs stitching print
	-	- Shifts to the previous hierarchy menu.

6.6.2.17 *Cutting position Menu*

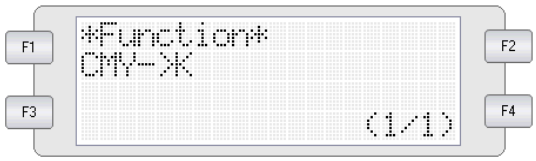
Set the media cutting position after printing has been finished.



Setup items	Parameters	Description
Cutting position	Standard	To cut the media to fit the media width, so that it meets the regulated size.
	<Data>	To cut the media according to the size of the printing data.
	-	- Shifts to the previous hierarchy menu.

6.6.2.18 *Function setup menu*

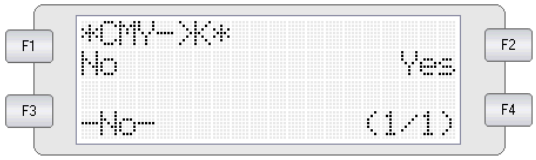
Perform various settings for processing of printing data.



Setup items	Parameters	Description
Function setup	CMY→K	Makes settings for printing method to present black.
	Scale	Sets the enlargement and reduction ratios for printing data.
	Mirror	To draw reversed printing data.
	-	• [CANCEL] key: Shifts to the previous hierarchy menu.

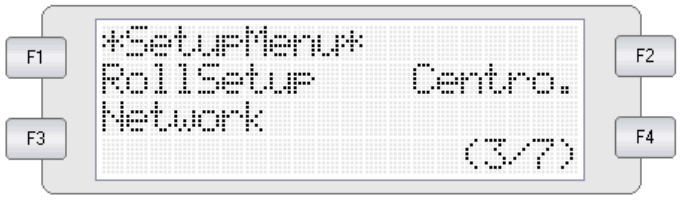
6.6.2.19 *CMY → K menu*

Replace CMY values with K (black)



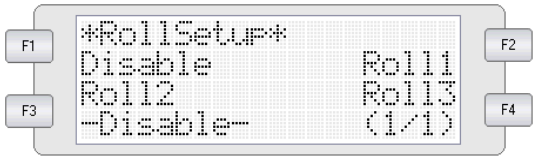
Setup items	Parameters	Description
CMY→K	<No>	• If MH-GL, GL2 are set on the Command Settings menu, be sure to use CMY (mixed colours) ink. • If RTL-PASS is set, use both CMY (mixed colours) ink and K (black) ink.
	Yes	Always use K (black) ink.
	-	To shift to the previous hierarchy menu.

6.6.3 Setup Menu 3/7



6.6.3.1 Roll Media setup menu

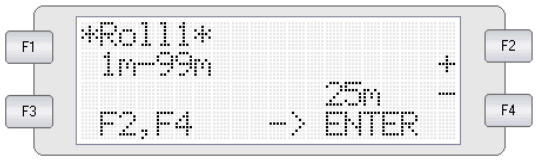
Perform various settings for roll media.



Setup items	Parameters	Description
Roll media setup	Disable	Set this when roll media setup is not used.
	Roll media 1	For each setup value of roll media, 3 settings of "Roll media 1" - "Roll media 3" can be set.
	Roll media 2	
	Roll media 3	
	-	• [CANCEL] key: To shift to the previous hierarchy menu.

6.6.3.2 Roll media length menu

Set media roll length.



Setup items	Parameters	Description
Roll media 1-4	1 m to <30 m>to 99 m	To change roll media length by operating the following keys. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

6.6.3.3 Centronics menu

Set communication mode to Centronics interface.

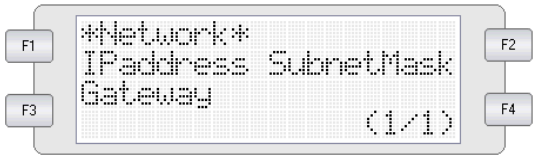
Setup items	Parameters	Description
Centronics	Centronics	To set communication mode to Centronics mode.
	<Bi Centro>	To set communication mode to Bi-Centronics mode.
	-	To shift to the previous hierarchy menu.

6.6.3.4 *Network setting menu*

Make the settings for the network interface.

⚠ Notes ⚠

The Network Settings menu is displayed if the network interface board has been installed. Be sure to consult the network administrator before making the settings in the Network Settings menu.



Setup items	Parameters	Description
Network (1/2)	IP address	To set the IP address of the product.
	Subnet mask	To set the subnet mask of the product.
	Gateway	To set the IP address of the connected gateway.
Network	-	• [CANCEL] key: To shift to the previous hierarchy menu.

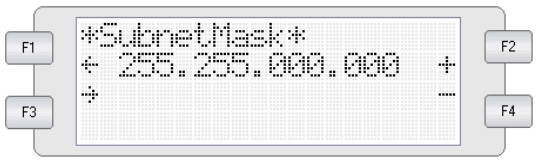
6.6.3.5 *IP address menu*

Set the IP address of the product.

Setup items	Parameters	Description
IP address	<000.000.000.000>- 223.255.255.254	Use the following keys to change the IP address. • [F1] key: Moves one digit to the left on the setting value to be changed. • [F2] key: Increases the setting value. • [F3] key: Moves to the right on the setting value. • [F4] key: Reduces the setting value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

6.6.3.6 *Subnet mask menu*

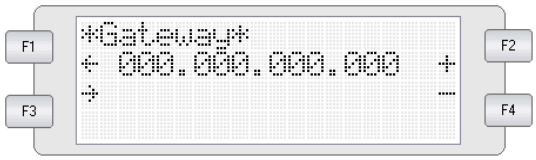
Set the subnet mask of the product.



Setup items	Parameters	Description
Subnet mask	000.000.000.000 <255.255.255.000> 255.255.255.255	Use the following keys to change the Subnet Mask. • [F1] key: Moves one digit to the left on the setting value to be changed. • [F2] key: Increases the setting value. • [F3] key: Moves to the right on the setting value. • [F4] key: Reduces the setting value. • [ENTER] key: Sets the setting value, and moves the screen to the menu of the previous hierarchy. • [CANCEL] key: Cancels the setting value, and moves the screen to the menu of the previous hierarchy. Refer to 'Network setting menu'

6.6.3.7 *Gateway menu*

The product sets the IP address of the connected gateway.



Setup items	Parameters	Description
Gateway	<000.000.000.000> - 223.255.255.254	Use the following keys to change the IP address. • [F1] key: Moves one digit to the left on the setting value to be changed. • [F2] key: Increases the setting value. • [F3] key: Moves to the right on the setting value. • [F4] key: Reduces the setting value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

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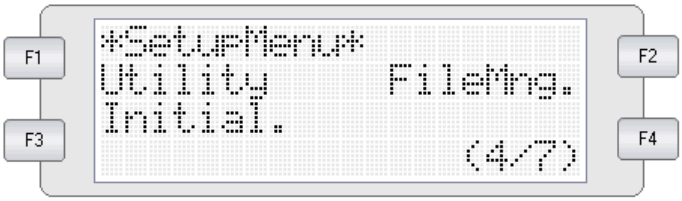
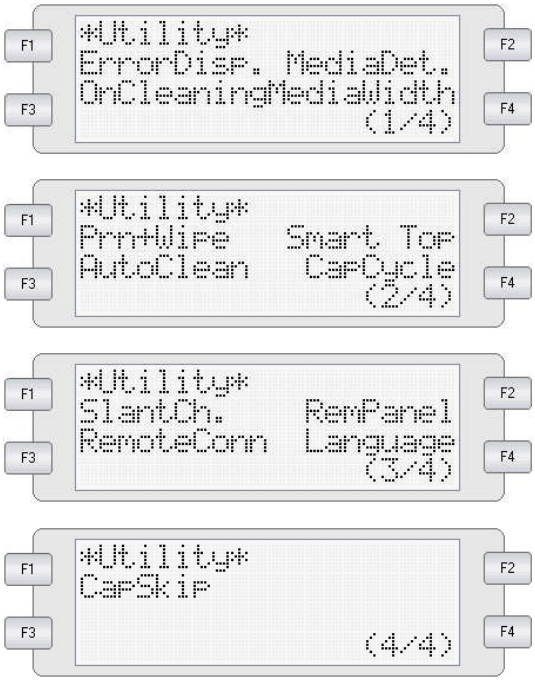


6.6.4.1 Utility menu

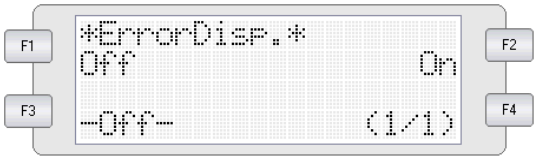
Perform various settings for application functions of products.



Setup items	Parameters	Description
Utility (1/4)	ErrorDisplay	To set display method to the operation panel when minor error occurred.
	Media detection	When media has been initialized, to perform detection of width and front edge of the media.
	Power on cleaning	Cleaning should be performed automatically when powered ON.
	Media width	If media detection is not performed for initial media, to set the width of the media in the tray.
Utility (2/4)	Print and Wipe	To wipe while printing, to take care of possible condensation on the print head nozzle plate.
	SmartTop	The ideal temperature of the media is near to the preheater. This area of paper is fed before a print starts to obtain perfect quality.
	Auto Cleaning	Performs cleaning cycle while printer is idle at the set temperature.
	Cap Cycle	To perform auto tubing flush when printer is idle.
Utility (3/4)	SlantCheck	Whether to perform a SlantCheck or not.
	RemPanel	Accept or decline remote control (for future use only)
	Remote connection	For future use only.
	Language	For future use only.
Utility (4/4)	Capskip	CapSkip is enabled and a print job is finished, capin is postponed with about 15s, to allow a new printjob to start immediately, without capin/capout cycle. Default OFF.
Utility (1/4 – 4/4)	-	• [CANCEL] key: To shift to the previous hierarchy menu.

6.6.4.2 *ErrorDisplay menu*

To set display method to the operation panel when minor error occurred.



Setup items	Parameters	Description
ErrorDisplay	<Off>	No ErrorDisplay.
	On	To perform ErrorDisplay.
	-	To shift to the previous hierarchy menu.

6.6.4.3 *Paper detection menu*

To perform detection of width and edge of the media, when media has been initialized

Setup items	Parameters	Description
media detect	<Normal>	To perform media detection automatically.
	OFF	No media detection.
	Take-up mechanism	Should be selected when using the winding system and media is most right loaded.
	RollFeed	Should be selected when using the winding system and media is centre loaded
	-	• [CANCEL] key: to shift to the previous hierarchy menu.

⚠ Notes ⚠

When setting "Take-up Mechanism" on the Media Detection menu, the following limits are applied to the operation of the product.
For initial media, only the media width is detected.
Under normal conditions, media cannot be sent backward.
The media cannot be moved forward or backward from the Origin Setting menu.
The settings in the Media Cut menu are disabled, and the settings are changed to "Off". (Refer to 'Media cut menu')

6.6.4.4 *On cleaning menu*

Set when cleaning should be performed automatically when powering ON.

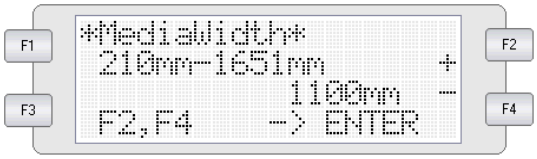
Setup items	Parameters	Description
Power on cleaning	<Off>	Power on cleaning is not performed.
	Little	Power on cleaning is performed.
	Normal	
	Powerful	
	-	To shift to the previous hierarchy menu.

6.6.4.5 *Media width menu*

If media detection has not been performed during initialization, the width of the media is set here.

⚠ Notes ⚠

On the media width menu,
If a value larger than the width of the media has been set, media or the product may be contaminated by the ink during printing.
If a value smaller than the width of the set media has been set, media may not be cut correctly.



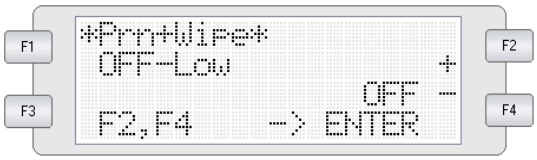
Setup items	Parameters	Description
media width	• 65" model: 210mm - <841mm> - 1651mm • 90" model: 210mm - <841mm> - 2240mm	To change media width by operating the following keys. • [F2] key: to increase the setup value. • [F4] key: to decrease the setup value. • [ENTER] key: to confirm the setup value • [CANCEL] key: to cancel the setup value

6.6.4.6 *Print and wipe menu*

Please note that print + wipe should be used very carefully and is by default not recommended in combination with Mild Solvent series Ink.

If you choose to recommend a user to use the print + wipe function, please also stress that the operator needs to take extra care to keep the wipers clean.

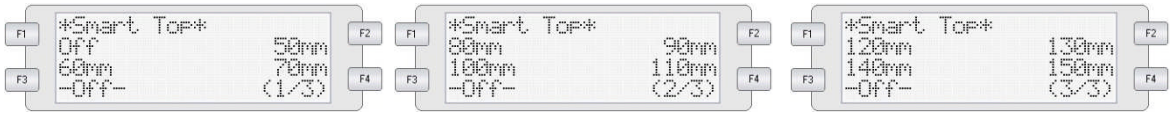
Carrying out wiping with wipers that are covered with a layer of ink that is dried out may cause permanent head damage.



Setup items	Parameters	Description
Print and Wipe	OFF	No wiping during printing
	High	After printing 10 passes, wiping cycle will be performed.
	Middle	After printing 16 passes, wiping cycle will be performed.
	Low	After printing 22 passes, wiping cycle will be performed.
	-	• [CANCEL] key: To shift to the previous hierarchy menu.

6.6.4.7 *Smart Top Menu*

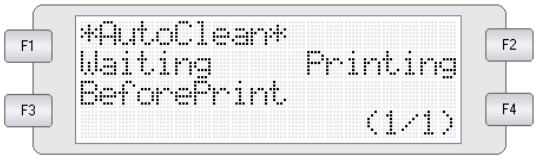
This feature will take care of a feed before every print. To start printing on media which is pre heated. This function will only be visible when the B heater is activated.



Setup items	Parameters	Description
Smart Top	**Off**	No media feed of 5 centimetres
	50 ➔ 150	A media feed of xxx centimetres occurs
	-	[CANCEL] key: shift to the previous hierarchy menu.

6.6.4.8 *Auto Cleaning Menu*

In normal printing conditions, it is not recommended to use this function. When experiencing regular nozzle loss, one of the three AutoCleaning features can be used.
When using this function, the wiping activity will be much higher, so be sure to securely perform your daily and weekly maintenance.



Setup items	Parameters	Description
Auto Clean	Waiting	To perform a little, normal, powerful cleaning while printer is idle for 1, 2, 3, 4, 5, 6, 9, 12, 18, 24 hours.
	Printing	To perform a little, normal, powerful cleaning after 5, 10, 15, 20, 30, 45, 60, 90, 120, 150,180 minutes of printing.
	Before Printing	To perform a little, normal, powerful a cleaning before every job
	-	• [CANCEL] key: to shift to the previous hierarchy menu.

6.6.4.9 *Cap Cycle Menu*

Perform a TubingFlush every 1 to 24 hours.

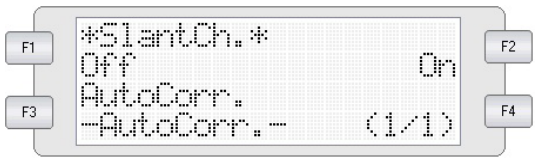
⚠ Notes ⚠

A TubingFlush is automatically performed after 10 minutes of idle and before shut down of the printer.

Setup items	Parameters	Description
Cap Cycle	OFF	No tubing flush will be performed
	1 - 24 hours	Every 1 – 24 hours (adjustable) a TubingFlush is performed.
	-	• [CANCEL] key: To shift to the previous hierarchy menu.

6.6.4.10 SlantCheck Menu

To enable or disable whether the printer performs a slant check after every print of at least 1 meter.



Setup items	Parameters	Description
SlantCheck	Off	No SlantCheck
	On	Perform SlantCheck
	Autocorrect	When a slant check is performed with an auto correction, the next print files are repositioned against the new media position. This will improve the comfort level for unattended printing.
	-	[CANCEL] key: shift to the previous hierarchy menu.

6.6.4.11 RemPanel

With this function it is possible to enable or disable remote control. This feature is for future use only! Leave this setting to its default value, OFF!

Remote connection

This feature is for future use only! Leave this setting to its default value, OFF!

Language

With this function it is possible to select other languages. Currently only English is available

Capskip

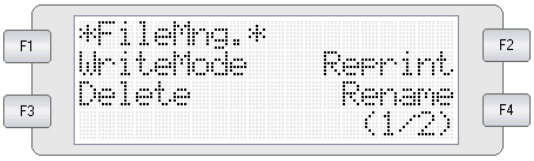
CapSkip is enabled and a print job is finished, capin is postponed with about 15s, to allow a new printjob to start immediately, without capin/capout cycle. Default value is OFF

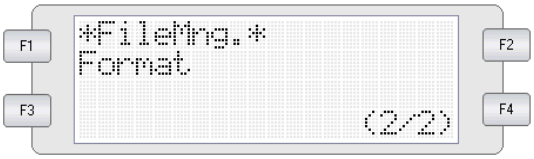
6.6.4.12 File management setup menu

Make various settings for the processing method of the printing data sent from computer to the installed hard disk in the printer.

⚠ Notes ⚠

The items on the File Management menu are displayed if a hard disk has been installed





Setup items	Parameters	Description
File management (1/2)	Write mode	To set writing method of printing data to the hard disk and printing method.
	Re-print	Set this when you want to draw the printing data saved on the hard disk.
	Delete	Set this when deleting the printing data saved on the hard disk.
	Re-name	To change file name of the printing data saved on the hard disk.
File management (2/2)	Format	To perform formatting of hard disk.
File management (1/2-2/2)	-	• [CANCEL] key: To shift to the previous hierarchy menu.

6.6.4.13 Write mode menu

To set the writing and printing method of printing data to the hard disk.

⚠ Notes ⚠

Write mode menu has been displayed if a hard disk has been installed on the product.
When writing printing data to the hard disk, be sure to set media in the tray.
The printing data is sized to fit the media.
If there is no media in the tray, the printing data cannot be written.

Setup items	Parameters	Description
Writing	<Off>	No writing to the hard disk. Performs printing immediately.
	Writing/Printing	Prints while writing the data to the hard disk.
	Printing after writing	Prints after writing the data to the hard disk.
	Writing only	Writes the data to the hard disk without printing. **⚠ Notes ⚠** Printing method can be set for printing data saved in the hard disk by Re-print menu.
	-	To shift to the previous hierarchy menu.

6.6.4.14 Re-print menu

Set following items when you want to draw printing data saved in the hard disk.
• File name
• Printing media number

⚠ Notes ⚠

Re-print menu is displayed if a hard disk has been installed on the product.
When Reprinting the printing data,
Use media of the same size as the printing data.
The size of the printing data will be the same as the initial paper size, even if paper of a different size has been set, the printing will start from the same printing start position.
Use a cassette with the same colour and type of ink that will be used during the printing data write.
If an ink cassette with differing colours or type is used, it will not print correctly.

Setup items	Parameters	Description
Re-print	File name	To select file name to be printed by operating the following keys. • [F1] key: to select file name with back feed way. • [F3] key: to select file name with forward feed way.
	Number: 0 to 99	To change printing media number by operating the following keys. • [F2] key: Increases the setup value. • [F4] key: Decreases the setup value.
	-	[ENTER] key: • To confirm setup value. • Product starts printing. • After printing, shift to normal condition. [CANCEL] key: Cancels the setup value, shifts to the previous hierarchy menu.

6.6.4.15 File delete menu

Set this when you delete printing data saved on the hard disk.

⚠ Notes ⚠

File delete menu is displayed if a hard disk has been installed.
If you delete a file by the File delete menu, you cannot retrieve that file again.
If you want to use the deleted file again, send the printing data to the hard disk again. Re-print menu is displayed if a hard disk has been installed.

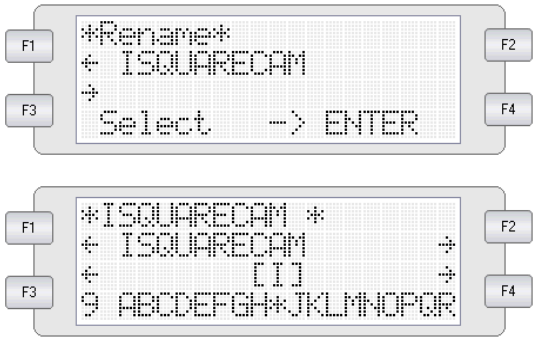
Setup items	Parameters	Description
Delete	File name	To select to-be-deleted file name by operating the following keys. [F1] key: To select file name with back feed way. [F3] key: To select file name with forward feed way. [ENTER] key: Deletes selected file [CANCEL] key: Cancel

6.6.4.16 Rename menu

To change file name of printing data saved in the hard disk.

⚠ Notes ⚠

Re-name menu is displayed if a hard disk has been installed.
The file name of printing data sent from the computer is always set to "TEMPFILE000".
To save transmitted image data, change the file name to a name of your choice in the Rename folder before transmitting the next printing data.



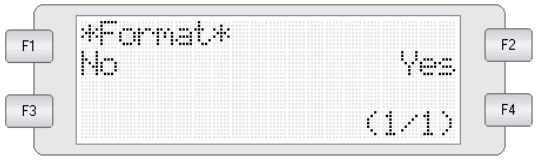
Setup items	Parameters	Description
To-be-changed file name	Characters you want to change	To select characters you want to change by operating the following keys. [F1] key: To select characters you want to change with back feed way. [F3] key: To select characters you want to change with forward feed way.
	Characters you can use are : A-Z or 0-9	To select to-be-changed characters by operating following keys. [F2] key: Selects to-be-changed characters with back feed way. [F4] key: Selects to-be-changed characters with forward feed way.
	-	[ENTER] key: Confirms the new value, shifts to the previous hierarchy menu. [CANCEL] key: Cancels setup value, shifts to the previous hierarchy menu.

6.6.4.17 Format menu

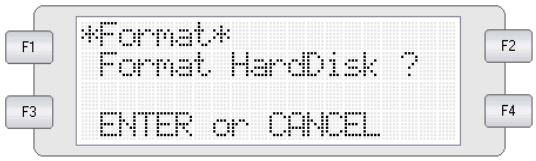
Perform formatting of the hard disk.

⚠ Notes ⚠

Format menu is displayed if a hard disk has been installed.
If formatting of the hard disk is performed, all data saved on the hard disk will be deleted.



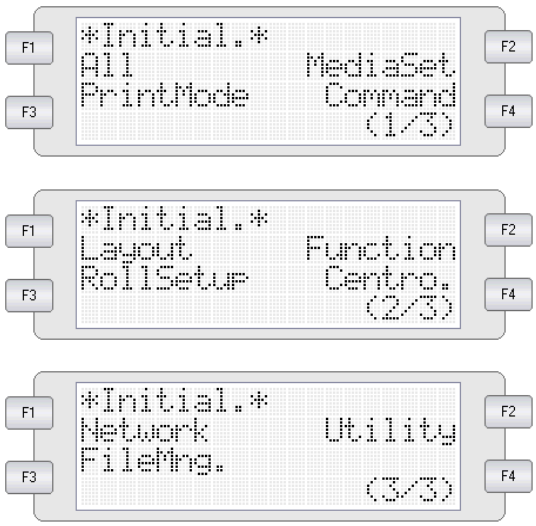
Setup items	Parameters	Description
Format	No	Format is not performed.
	-	[CANCEL] key: Cancels setup value, shifts to the previous hierarchy menu.
	Yes	To perform formatting.



Setup items	Parameters	Description
Format	Format will be performed. OK?	• [ENTER] key: • Product starts formatting. • The following messages are displayed on the operation panel. * Format * Format HardDisk …. • After formatting, to shift to the previous hierarchy menu.
		• [CANCEL] key • Formatting will not be performed. • To shift to the previous hierarchy menu.

6.6.4.18 *Initialize setup menu*

It is possible to reset all set values to the factory default.

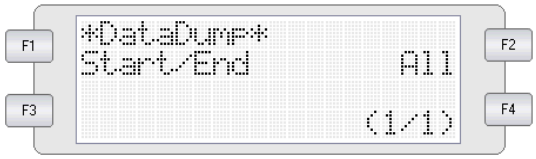


Setup items	Parameters	Description
Initialize (1/3)	All	Returns all parameters to the factory setting.
	MediaSet	Returns parameters in the media setup menu to the factory setting.
	PrintMode	Returns parameters in the print mode menu to the factory setting.
	Command	Returns parameters in the command setup menu to the factory setting.
Initialize (2/3)	Layout	Returns parameters in the layout setup menu to the factory setting.
	Function	Returns parameters in the function setup menu to the factory setting.
	Roll Setup	Returns parameters in the roll media setup menu to the factory setting.
	Centro	Returns parameters in the Centronics setup menu to the factory setting.
Initialize (3/3)	Network	Returns parameters in the network setup menu to the factory setting.
	Utility	Returns parameters in the utility setup menu to the factory setting.
	FileMng.	The file management setup menu values are reset to factory default settings.
Initialize (1/3-3/3)	-	• [CANCEL] key: Shifts to the previous hierarchy menu.

6.6.5 Setup Menu 5/7

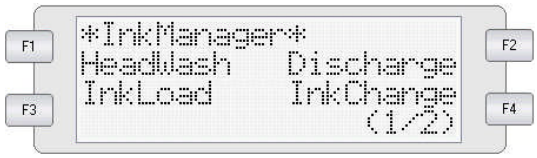
6.6.5.1 Data dump menu

To perform dump printing for online function check.



	Parameters	Description
Data Dump	Start/End	⚠ Notes ⚠ Dump printing is used by service persons to check the functions of the printer. Do not use this function for normal printing.
	All	
	-	• [CANCEL] key: • To exit Dump Mode. • To shift to the previous hierarchy menu.

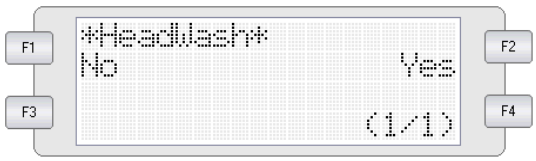
6.6.5.2 Ink Manager Menu



Setup items	Parameters	Description
Ink Manager (1/2)	Head Wash	To perform a head cleaning.
	Discharge	To remove all ink or cleaning liquid out of the tubes of the printer. For example when in longstore mode
	Ink Load	To load ink.
	Ink Change	To change ink configuration (2x4 → 1x6)
Ink Manager (2/2)	InkSupply	For future use only
	ChipMgr	For future use only
	ColorMode	To set the colour mode. (Only available in ChipMgr Printer mode).
	-	• [CANCEL] key: shift to the previous hierarchy menu.

6.6.5.3 *Head Wash menu*

To perform a head wash to remove all ink of the ink supplying system.



Setup items	Parameters	Description
Head clean	No	Do not wash the ink supplying system.
	Yes	To wash the ink supplying system.
	-	• [CANCEL] key: shift to the previous hierarchy menu.

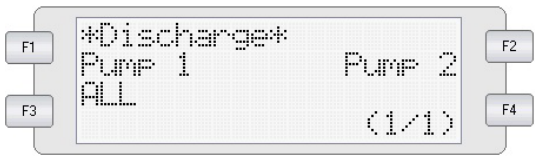
⚠ Notes ⚠

Only after two head wash cycles it is possible to change ink types. Use the 'Ink Load' to load ink

The process consists of several cleaning loadings, several air loadings and one ink loading. On the display of the operation panel a time indication is mentioned on the fourth line.

Message	Time
Please remove cart.	
Ink Discharge	6
Please insert Cleaning cart	
During washing wait for a while	22
Remove cassettes	
During washing wait for a while	6
The end	
Ink Load	9

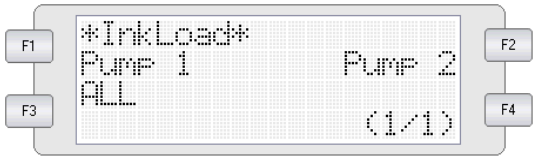
Discharge menu



Setup items	Parameters	Description
Discharge	Pump 1	Discharge ink into head 1 and 2
	Pump 2	Discharge ink into head 3 and 4
	ALL	Discharge ink for complete system
	-	• [CANCEL] key: shift to the previous hierarchy menu.

6.6.5.4 *Ink Load menu*

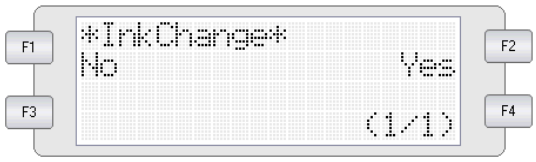
Start and stop an ink load.



Setup items	Parameters	Description
Ink Load	Pump 1	Load ink into head 1 and 2
	Pump 2	Load ink into head 3 and 4
	ALL	Load ink for complete system
	-	• [CANCEL] key: shift to the previous hierarchy menu.

6.6.5.5 *Ink Change menu*

Change the ink configuration (from 2x4 to 1x6 or opposite).



Setup items	Parameters	Description
Ink Change	No	Do not perform an ink change.
	Yes	To start the ink change cycle.
	-	• [CANCEL] key: shift to the previous hierarchy menu.

⚠ Notes ⚠

To reduce the consumption of ink and cleaning liquid it is recommended to change ink types by using the 'Ink Change' cycle.

The process consists of several cleaning loadings, several air loadings and one ink loading. On the display of the operation panel a time indication is mentioned on the fourth line.

Message	Time
Please remove cart. (*)	
Ink Discharge (*)	1
Please insert Cleaning cart (*)	
During washing wait for a while (*)	5
Remove cassettes	
During washing wait for a while	6
Please insert ink cart.	
Ink refill	9
The end	

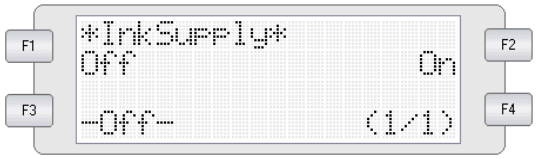
(*) = This will be asked 5 times.

6.6.5.6 *InkSupply menu*

This setting should be enabled (ON) when using the Spitfire Extreme Bulk Ink System.

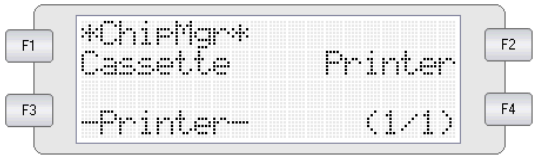
⚠ Important ⚠

Please refer to the user's Guide of the Spitfire Extreme Bulk Ink System to know how to install and use it.



Setup items	Parameters	Description
InkSupply	Off	Using ink cassettes
	On	Using the Spitfire extreme Bulk Ink System
	-	• [CANCEL] key: shifts to the previous menu.

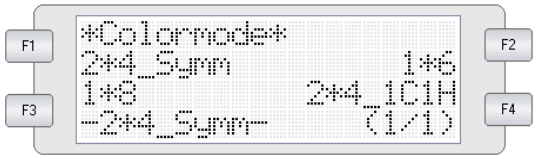
6.6.5.7 *ChipManager menu*



Setup items	Parameters	Description
ChipMgr	Cassette	Use the smart chips on the ink cassettes
	Printer	Use the smart chip manager system on the top (or back) of the machine. Recommended when working with a Spitfire extreme Bulk Ink System.
	-	• [CANCEL] key: shifts to the previous menu.

6.6.5.8 *ColorMode menu*

To select the colour mode (CMYK or CMYKLcLm)



Setup items	Parameters	Description
	2x4_Symm	4 Colour mode
	1x6	6 Colour mode
	1x8	8 Colour mode
	2x4_1C1H	For future use only!
	-	• [CANCEL] key: shifts to the previous menu.

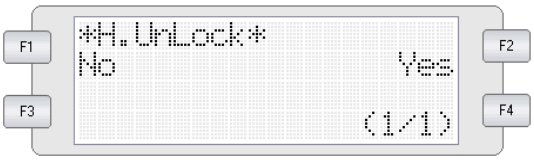
⚠ Notes ⚠

Only available in printer mode.

6.6.6 Setup Menu 6/7

6.6.6.1 Head Unlock menu

To unlock the carriage.



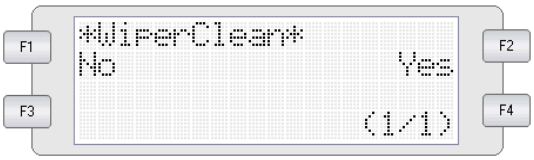
Setup items	Parameters	Description
Cutter change	No	Do not change the cutting blade. To shift to the previous hierarchy menu.
	Yes	To change the cutting blade.
	-	• [CANCEL] key: shifts to the previous hierarchy menu.

6.6.6.2 Wiper clean menu

Clean the wipers.

⚠ Notes ⚠

Refer to "Cleaning the cleaning wiper" for details regarding the procedure for cleaning the cleaning wiper.



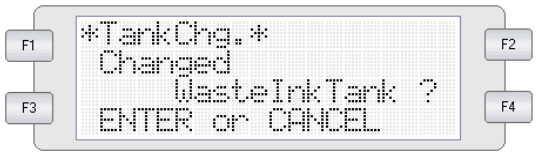
Setup items	Parameters	Description
Wiper clean	No	Do not clean the cleaning wiper. To shift to the previous hierarchy menu.
	Yes	To clean the cleaning wiper.
	-	• [CANCEL] key: shifts to the previous hierarchy menu.

6.6.6.3 Tank change menu

Change the waste fluid tank. Set when changing the waste fluid tank.

⚠ Notes ⚠

Refer to "Replacing the waste bottle" for details regarding the procedure for changing the waste fluid tank.

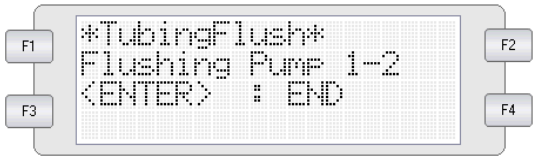


Setup items	Parameters	Description
Tank change	Cancel	Do not change the tank.
	Enter	When tank has been changed.
	-	• [CANCEL] key: shifts to the previous hierarchy menu.

6.6.6.4 Tubing Flush menu

Follow the instructions below to flush the tubings.

The head will unlock and following message will be displayed:



Wait until the pumps start operating.

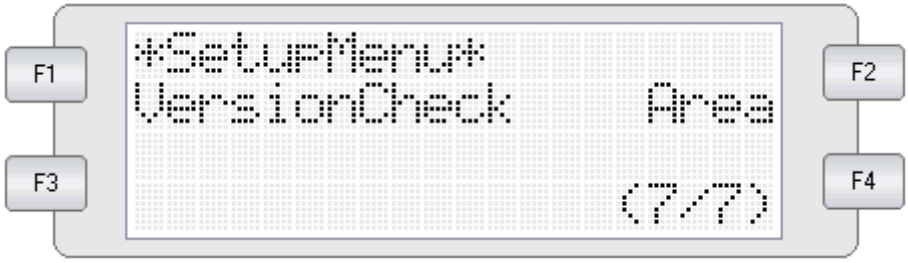
Open the front cover.

Inject appropriate cleaning liquid in the caps by way of a pipette until the caps do not change colour.

When done, press the ENTER key to END the TubingFlush

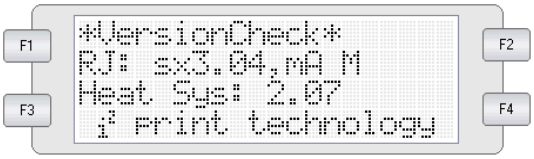
Close the front cover.

6.6.7 Setup Menu 7/7



6.6.7.1 Version Check menu

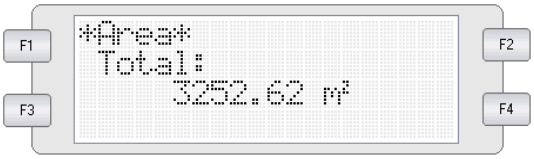
Check the installed firmware and heater system version.



Setup items	Parameters	Description
Version Check	-	• [CANCEL] key: shift to the previous hierarchy menu.

6.6.7.2 Area

Check the total amount of the printed area (x.xx m²) in the printer's life time.



Setup items	Parameters	Description
Area	-	[CANCEL] key: shift to the previous hierarchy menu.

7 TROUBLESHOOTING

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7.1 INTRODUCTION

This chapter explains troubles that may occur when using the printer and how to solve them.
If you encounter an error not described in this chapter, refer to "Error messages" and contact your local MUTOH dealer.

⚠ Notes ⚠

To receive our customer support service, please present your warranty. If you do not present it, you may be changed for the service even if it is within the term of warranty.
If you have a maintenance service contract, please show the agreement or other documents.

Failures and malfunctions of the printer
This section describes the failures and malfunctions of the printer not displayed as errors, causes and solutions.

(1) The printer does not work after switching it ON.

N°	Possible cause	Solutions	Reference
1	You did not plug the power cable in.	Plug in the power cable.	Refer to 'Connecting the power cable'
2	The AC power does not match the specified voltage.	Use the printer at the specified voltage	Refer to 'Connecting the power cable'
3	The front cover is open.	Close the front cover.	Refer to 'Media handling'

(2) The printer does not work after media has been loaded.

N°	Possible cause	Solutions	References
1	The front cover is open.	Close the front cover	Refer to 'Media handling'
2	The pressure rollers have been raised.	Lower the pressure rollers lever.	Refer to 'Media handling'
3	You did not load the media straight into the printer.	Load the media straight into the printer.	Refer to 'Media handling'
4	One or more ink cassettes are not installed.	Install (an) ink cassette(s).	Refer to 'Installing ink cassettes'
5	You did not use recommended media.	Use recommended media.	Refer to 'Media type'
6	You used the printer in direct sunlight or other locations not appropriate for the specified environment.	Use the printer in the specified environment.	Refer to 'Product Specifications'

(3) The printer does not work after data has been sent from a computer.

N°	Possible cause	Solutions	Reference
1	You did not connect the interface cable.	Connect the interface cables.	Refer to 'Connecting the Centronics interface' Refer to 'Connecting the network interface'
2	One or more ink cassettes have not been installed.	Install (an) ink cassette(s).	Refer to 'Installing ink cassettes'
3	Ink cassette is empty.	Replace the ink cassette.	Refer to 'Replacing ink cassettes'

(4) The printer does not print and an error is generated after data has been sent from a computer.

N°	Possible cause	Solutions	References
1	The model setting of the computer is not correct.	Make sure that the model settings on computer and printer are the same.	Refer to 'Connecting the printer to your PC'
2	The interface setting or command mode on computer and printer do not match.		

(5) Printouts are partially blurred or missing.

⚠ Notes ⚠

You may not obtain reasonable quality with media other than recommended media.

N°	Possible cause	Solutions	References
1	The media is damped.	Replace with new media.	Refer to 'Replacing media'
2	You used folded, creased or curled media.		
3	Check the media for curling or lift off.	Use the recommended media. When using media other than recommended media, set the following items in the media setting menu. Media HeadHeight Stiff	Refer to 'Media type' Refer to 'Menu Overview'

(6) Printing position is not correct (some positions are not printed.)

N°	Possible cause	Solutions	References
1	The loading position of the media is not correct.	Load the media correctly.	Refer to 'Loading media'
2	You used the scale or mirror setting.	Turn off the scale or mirror setting, or make the setting again.	Refer to 'Menu Overview'
3	You set the origin or starting position.	Turn off the origin or starting position setting, or make the setting again.	Refer to 'Menu Overview'

(7) Media jams occur frequently.

⚠ Notes ⚠

We cannot ensure correct media feeding with media other than recommended media.

N°	Possible cause	Solutions	References
1	You did not use recommended media.	Use recommended media.	Refer to 'Media type'
2	You used the printer in an environment other than the specified environment.	Use the printer in the specified environment.	Refer to 'Cautions on handling media'
3	You used old media.	Replace with new media.	Refer to 'Replacing media'
4	You used folded, creased, or curled media.		
5	Check the media for curling or lift-off.	Use the recommended media. When using media other than recommended media, set the following items in the media setting menu. • Media • HeadHeight • Stiff	Refer to 'Media type' Refer to 'Menu Overview'

(8) Roll media cannot be cut correctly.

N°	Possible cause	Solutions	References
1	The edge of the cutting blade is not sharp.	Replace the cutting blade.	Refer to 'Replacing the cutting blade'
2	The roll media has static electricity.	Remove the static electricity on the roll media.	-
3	Media is too heavy to cut automatically.	Cut the media manually.	

(9) You cannot perform initial ink charging.

N°	Possible cause	Solutions	References
1	The front cover is open or the hold lever is up.	Close the front cover and lower the hold lever.	Refer to 'Media handling'
2	Some of the 8 ink cassettes are not loaded properly.	Load all of the 8 cassettes properly.	Refer to 'Installing ink cassettes'

(10) Ink is not used though you performed initial ink charge.

N°	Possible cause	Solutions	References
1	The ink cassette is cold or frozen.	Leave the ink cassette in normal temperature for three hours at least, and perform cleaning a few times.	Refer to 'Head cleaning'
2	You switched off the printer during the initial ink charging.	Turn on the printer to continue the initial ink charging.	Refer to 'Installing ink cassettes'
3	The printer rarely prints correctly only after initial ink charging.	Perform cleaning a few times and check again.	Refer to 'Head cleaning'

(11) The media is off or damaged when loading it.

⚠ Notes ⚠

Remove the jammed or damaged media, referring to "When media jams occur".

N°	Possible cause	Solutions	References
1	You did not use recommended media.	Use recommended media.	Refer to 'Media type'
2	The loading position of the media is not correct.	Load the media correctly.	Refer to 'Loading media'
3	Foreign material, such a piece of media, is attached to the pressure rollers.	Clean the pressure rollers.	Refer to 'Cleaning the inside of the printer'
4	You used the printer in direct sunlight or other locations not appropriate for the specified environment.	Use the printer in the specified environment.	Refer to 'Product Specifications'
5	You loaded sheet media into the printer.	Set the CutSize setting to Length or Width.	Refer to 'Menu Overview'
6	You used folded, creased, or curled media.	Replace with new media.	Refer to 'Cautions on handling media'
7	Check the media for curling or lift-off.	Use the recommended media. When using media other than recommended media, set the following items in the media setting menu. • Media • HeadHeight • Stiff	Refer to 'Media type' Refer to 'Menu Overview'

(12) Media is damaged during media Initial.

⚠ Notes ⚠

Remove the jammed or damaged media.

N°	Possible cause	Solutions	References
1	You did not use recommended media.	Use recommended media.	Refer to 'Media type'
2	The loading position of the media is not correct.	Load the media correctly.	Refer to 'Loading media'
3	You did not load the media straight into the printer.	Load the media straight into the printer.	Refer to 'Loading media'
4	Foreign material, such a piece of media, is attached to the pressure rollers.	Clean the pressure rollers.	Refer to 'Cleaning inside the printer'
5	You used the printer in a location with air conditioner or other location not appropriate for the specified environment.	Use the printer in the specified environment.	Refer to 'Product Specifications'
6	You loaded sheet media into the printer.	Set the CutSize setting to Length or Width.	Refer to 'Menu Overview'
7	You used media folded, creased, damaged, tore, curled.	Replace the media.	Refer to 'Cautions on handling media'

(13) Tracing media or other thin media cannot be detected.

N°	Possible cause	Solutions	References
1	You did not use recommended media.	Use recommended media.	Refer to 'Media type'
2	You used the printer in direct sunlight or other locations not appropriate for the specified environment.	Use the printer in the specified environment.	Refer to 'Product Specifications'

(14) Media size is wrong during media Initial.

N°	Possible cause	Solutions	References
1	You did not use recommended media.	Use recommended media.	Refer to 'Media type'
2	You did not load the media straight into the printer.	Load the media straight into the printer.	Refer to 'Media handling'
3	The curled surface of media is up when loading.	Remove the curl in the media, or replace with new media.	Refer to 'Media handling'
4	You used the printer in a location with air conditioner or other location not appropriate for the specified environment	Use the printer in the specified environment.	Refer to 'Product Specifications'
5	You reused printed media.	Use new, not printed media.	Refer to 'Media type'

(15) Media is crooked while printing.

N°	Possible cause	Solutions	References
1	You did not use recommended media.	Use recommended media.	Refer to 'Media type'
2	The loading position of the media is not correct.	Load the media correctly.	Refer to 'Loading media'

(16) The printer is not connected to a computer using the Centronics interface.

N°	Possible cause	Solutions	References
1	You did not connect the Centronics interface cable correctly.	Connect the Centronics interface cable correctly.	Refer to 'Connecting the Centronics interface'
2	When the printing data is transferred from the computer, the DATA lamp on the operation panel is not lit.	If the DATA lamp is not lit, contact the computer maker.	-
3	The Centronics setting on the printer does not match the setting on the computer.	Make the Centronics setting on the printer so that it matches the setting on the computer.	Refer to 'System requirements'
4	The type of command that is currently set, does not match the command of a computer or a driver.	Match the command setting of the printer to the environment of a computer or a driver.	Refer to 'Menu Overview'

(17) The printed lines are blurred.

N°	Possible cause	Solutions	References
1	You did not use recommended media.	Use recommended media.	Refer to 'Media type'
2	You used too thick or too thin media.	Use recommended media	Refer to 'Media type'
3	You used bond media.	Use recommended media.	Refer to 'Media type'
4	The printed surface is not the printable side.	Pay attention to the printable side to load media correctly.	Refer to 'Media handling'
5	Did you try head cleaning?	Perform head cleaning. Perform strong cleaning. Clean the surface of the print head. Perform long save cleaning.	Refer to 'Head cleaning' Refer to 'Cleaning the cleaning wiper'

(18) White or black lines on printouts.

N°	Possible cause	Solutions	References
1	You did not use recommended media.	Use recommended media.	Refer to 'Media type'

(19) Lines are missing.

N°	Possible cause	Solutions	References
1	The validity date of the ink cassette has been expired.	Use a new ink cassette.	Refer to 'Replacing ink cassettes'
2	You did not use recommended media.	Use recommended media.	Refer to 'Media type'
3	Did you try minor adjustments for image quality?	Try minor adjustments for image quality.	Refer to 'Alignment'

(20) "Bubbles" near the Heaters.

N°	Possible cause	Solutions	References
1	You did not use recommended media.	Use recommended media.	Refer to 'Media type'
2	You did not set the correct heater	Lower the temperature or turn off the Heater	Refer to 'controlling the heater elements'

(21) Top Feed problem.

N°	Possible cause	Solutions	References
1	Media jam occurred due to a need for Top feed.	Insert a minimum Top Feed	Refer to 'Top Feed menu'

7.2 ERROR MESSAGES

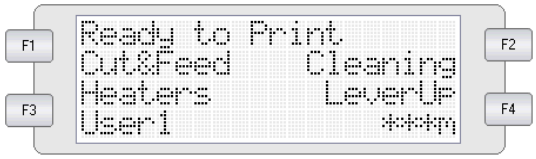
This chapter explains the messages displayed on the operation panel both when the printer works normally and when an error occurs, and possible solutions.

7.2.1 Status messages

The following are the status messages while the printer works normally.

(1) Displays the operational status (1)

The following operational status is displayed on the first line of the operation panel.



N°	Display	Solutions	References
1	Ready to print	Waiting for the next operation. (Media has been loaded.)	-
2	Media End	The printer is waiting for the next operation. (No media has been loaded into the printer.)	Refer to 'Media handling'
3	Receiving	The printer is receiving data.	-
4	Converting	The printer is converting data.	-
5	Printing	The printer is printing.	-
6	Warning Waste Ink Tank	Replace the waste bottle.	Refer to 'Replacing the waste bottle'
7	Warning Ink Tube Life	Contact the dealer where you bought the printer or MUTOH's technical support centre.	-

(2) Displays of the operational status (2)

The following operational status is displayed between the first and the third line of the operation panel.

N°	Display	Solutions	References
1	Ink Refill **min	The printer performs ink charging. Wait for a while.	Refer to 'Installing ink cassettes'
2	During cleaning **min	The printer performs head cleaning. Wait for a while.	Refer to 'Head cleaning'
3	Media Initial ********	The printer performs initial setting of media. Wait for a while. Indicates the media type setting made.	Refer to 'Setting media type'
4	During discharge Wait for a while	The printer performs head cleaning and ink discharging. Wait for a while.	Refer to 'Changing Ink Types'
5	During washing Wait for a while	The printer performs a head cleaning. Wait for a while.	Refer to 'Changing Ink Types'

7.2.2 Message type error display and solutions

The following are the message type error display and solutions.
The following message type errors are displayed when an error occurs while operating the printer.
When one of the following message type error displays appears, the printer may stop operation.
If the printer stops operation, solve the problem to delete the error message and restart the printer.

(1) Error messages regarding media feeding

The following error message is displayed on the first line of the operation panel.

N°.	Display	Descriptions	Solutions	References
1	Undefined media	The printer failed to detect the media. (The printer stops.)	Reload the media.	Refer to 'Loading media'
2	Media Slant	The media was fed at an angle into the printer. (The printer stops.)	Reload the media.	Refer to 'Loading media'
3	End Of Roll	Roll media runs out. (The printer stops.)	Load new roll media.	Refer to 'Replacing media'
4	Cover Open	The front cover is open. (The printer stops.)	Close the front cover.	-
5	Please Set Media	The pressure roller has been raised. There is no media.	Set the media and lower the pressure roller.	-
6	Media JAM Error	The media jammed. (The printer stops.)	Remove the jammed media and reset a media.	Refer to 'When media jams occur'

(2) Error messages regarding warnings of the remaining ink

The following error message is displayed on the forth line on the operation panel.

N°.	Display	Descriptions	Solutions	References
1	Near End [*]	The ink is running short in the ink cassette. (The printer continues to perform.)	Prepare a new ink cassette.	Refer to 'Replacing ink cassettes'

⚠ Notes ⚠

The [*] shows the colour of the ink causing the error according to the following codes:
1-8 : ink cassette slot number (Refer to 'Installing ink cassettes')
All : All ink cassettes

(3) Other error messages

The following error message is displayed on the forth line of the operation panel

N°.	Display	Descriptions	Solutions	References
1	Ink Status Cassette [*]	Ink cassette(s) is (are) empty. (The printer stops.)	Replace the ink cassette(s)	Refer to 'Replacing ink cassettes'
2	Ink Status No Filled [*]	Initial filling has not been performed.	Perform initial filling of the ink.	Refer to 'Installing ink cassettes'
3	No original ink	You did not load MUTOH's recommended ink cassette. (The printer stops.) SmartChip is not well positioned on the cassette	Load MUTOH's recommended ink cassette. Reposition the smart-chip (17.75 ± 0.5 mm from the right side and 43 ± 0.5 mm from the bottom)	Refer to 'Replacing ink cassettes' -
4	4 Memory Status NoMemory DIMM 64 MB	Short of memory while converting or printing data.	Consider increasing the memory capacity.	-

⚠ Notes ⚠

The [*] shows the colour of the ink causing the error according to the following codes:
1-8 : ink cassette slot number (Refer to 'Installing ink cassettes')
All : All ink cassettes

7.2.3 Data error display and solutions

Following are data errors and possible solutions during printer operations.
Data errors are displayed when a communication error occurs between computer and printer.
If data error occurs, the following error messages are displayed and the printer stops.
Solve the problem to delete the error message and restart the printer.

N°.	Message	Descriptions	Solution	Reference
1	Online status I** Error [ ]	An error has occurred while receiving data.	Confirm the communication condition between computer and printer.	Refer to 'Menu Overview'

⚠ Notes ⚠

***** In error messages are code numbers indicating what kind of error occurred.**

7.2.4 Command error display and solutions

Following are command error descriptions and possible solutions during printer operations.
Command errors are displayed when an error has occurred while converting the command data sent from computer to printer.
If a command error occurs, the following error messages are displayed and the printer stops.
Solve the problem to delete the error message and restart the printer.

N°.	Message	Descriptions	Solution	Reference
1	command status MH** Error [ ]	Invalid command data is sent from computer.	Make sure that the settings of the computer and the printer match.	Refer to 'Menu Overview'

⚠ Notes ⚠

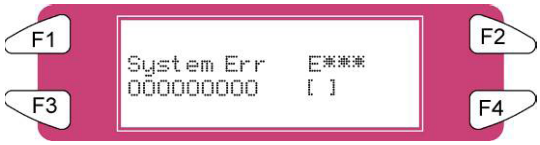
***** In error messages are code numbers indicating what kind of error occurred.**
[ ] may indicate the command code of the error.
For the settings on a computer, refer to the computer's operation manual.

7.3 ERROR REQUIRING A RESTART

Following are descriptions and solutions requiring a restart.
Errors requiring a restart are displayed when the following fatal error has occurred during printer operation.
Foreign material disturbing the printer operation is involved in the printer.
An electrical circuit (such as board, motor, or sensor) failure has occurred.
An error on the control program has occurred.

If error requiring a restart has occurred, the printer prints and then stops (see below).
(1) Power relating to the driving system is shut off automatically.
(2) All indicator lights on the operation panel are switched ON and beeps sound continuously.
(3) An error message is displayed on the operation panel.
Press any key on the operation panel to stop the beep sounds.

If an error requiring a restart has occurred, solve the problems to restart the printer and delete the error.
If the same error message is displayed again, contact your local MUTOH dealer. Be sure to inquire the code numbers of the error messages.



N°.	Message	Descriptions	Solutions	References
1	E System error*** OOOOOOOOOO [ ]	An error which cannot be solved promptly has occurred.	1. If foreign materials such as a piece of media or media dust are involved in the driving system, remove them. 2. Make sure that the replaced parts are correctly installed. 3. Power OFF the printer. After 10 seconds or more, power it back ON.	Refer to 'When media jams occur ' Refer to 'Replacing consumables'

⚠ Notes ⚠

***** In error messages are code numbers indicating what kind of error occurred.**
[ ] may indicate the command code of the error.
For the settings on a computer, refer to the computer's operation manual.

7.4 WHEN MEDIA JAMS OCCUR

If the loaded media gets jammed in the printer, follow the steps below to remove the media.

7.4.1 How to remove a piece of media (cut media)

Press [F4] to raise the pressure rollers.
The MEDIA SET lamp will switch ON (orange).
The following message is displayed on the operation panel.

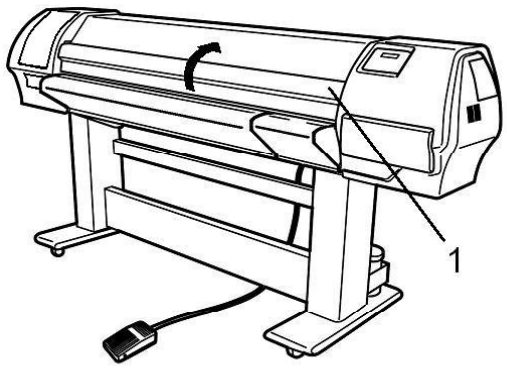
⚠ Notes ⚠

For raising or lowering the pressure rollers, you can use the foot switch instead of the operation panel.

If a piece of media or media dust is stocked in the printer, open the front cover and remove the piece of media or media dust.

⚠ Caution ⚠

Be sure not to pinch your fingers while opening and closing media cover.



1	Front Cover

If there is an error requiring a restart, power the printer OFF and ON again.

7.4.2 How to remove a piece of media (roll media)

To remove a piece of roll media, please refer to the User's Guide "Handling roll media".

7.5 EMERGENCY CAPPING PROCEDURE

The procedure described below, is strongly recommended for the Mild Solvent series printers, to avoid print heads drying out during a printer failure.

In some cases, it may happen that the printer gets blocked during the printing process because of:

Blocking of machine due to a media crash
Failure of electricity grid
A machine failure

In most cases:

The carriage will still be away from the capping station, above the printing platform
The capping-station will be in the 'down' position.

It is important to immediately take action and reboot the machine. The machine will then automatically re-initialize and put the carriage back on the capping-station to protect the print heads.

In some situations, a support or a technical intervention is required to solve the problem e.g. when it is not possible to boot the machine anymore. In these cases it's very important to protect the heads during the down-time of the machine!

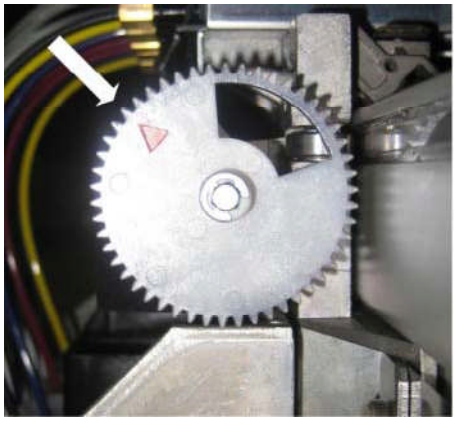
If this is not done, the print-heads might completely dry-out and will result in broken heads which will then also need to be replaced.

To avoid that kind of situation, there is a simple procedure.

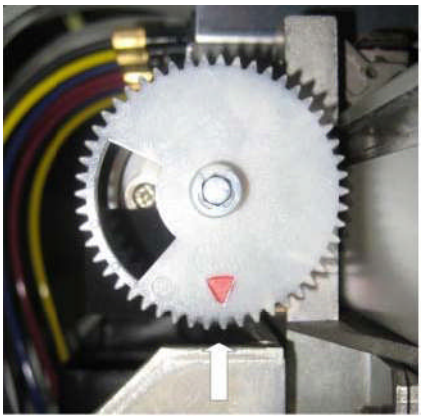
Step 1 : Never leave the printer in this situation during a down-time for a longer period (= a few hours up to a few days). Print heads might completely dry out and can be damaged!

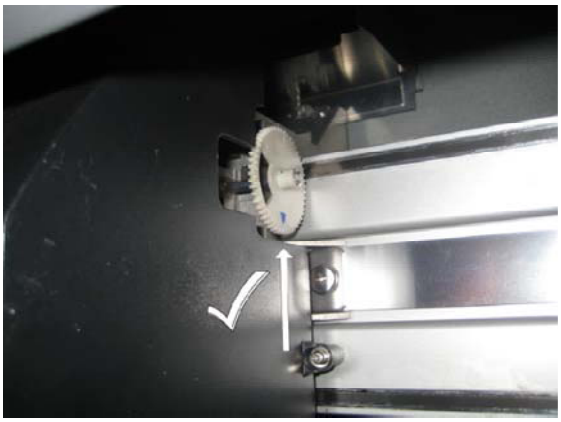
Step 2 : Remove the complete wiper plate assy with the 4 thumb-screws.

Step 3 : Move the carriage close to the capping station. Warning: if you feel obstruction, turn-up the head-height slide-gear up. The carriage is probably obstructed by the pressure rollers.



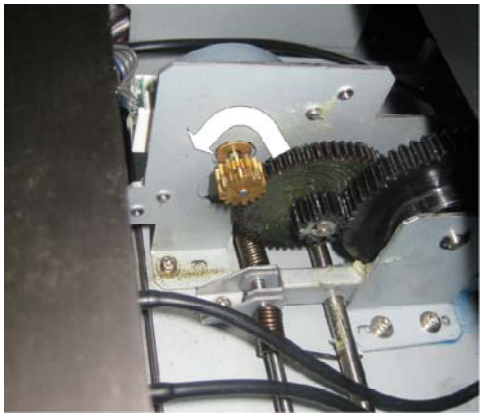
Step 4 : When the carriage is above the capping-station, turn back the head-height slide-gear. Make sure the arrow is in the DOWN-position





Step 5 : Move the carriage to the utter most right position. Make sure the slide gear is not blocking.

Step 6 : To protect the print heads, turn the small brass gear counterclockwise. The capping station will suddenly move upwards. Just continue to turn until you cannot go further.



Step 7 : Verify if the carriage is properly capped. Try to move the carriage. If it is properly capped, it should not be possible. Now your machine is temporarily protected until the technical issue is resolved!